

대구·경북지역 일부 자폐장애 환자의
4~7년후 추적 연구*
- 자폐장애의 증상 중심으로 -

A FOUR TO SEVEN YEAR FOLLOW-UP STUDY OF SYMPTOMS OF
AUTISTIC CHILDREN IN TAEGU AND KYUNGPOOK PROVINCE

정 철 호**†

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연구목적 : 자가 ,
가 .

방 법 : DSM - III - R 50 (1 13) 4 7 (6.4±1.1) 가
, , , , ,
DSM - III - R A(Social interaction, A1 A5), B(Communication, B1 B6), C(Activities
and interests, C1 C5)
결 과 : 가 가 가 , A, B, C
가 . 50% A1, A2, A3 , B1, B2, B3, B4, B5 , C1, C3
가 가 가
결 론 : 가
가
중심 단어 : . . .

서 론

1943 Kanner¹⁾가 , DSM - III - R²⁾(APA, 1987) DSM - IV³⁾(APA, 1994)
가 ,

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1995

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3 . , 가 60
 , , 75% 가 가
 , , (poor or very poor), 15 25%
 , , (fair), 5 20% 가
 , , (good or nearnormal), 1 2% (normal) 8).
 12 10,000 2 5 .
 가 2)3). , ,
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 , , 가
 가 , , 가
 , , , 17).
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 가 ? 가 , 가 가
 가 3 가
 . 가
 , 70 ,
 , 가
 가
 2-9). 60
 10-17)
 가 (Table 1). 1950 1970

Table 1. Proportions of autistic individuals showing various outcomes in follow-up studies

Studies	Outcome Type (%)		
	Good	Fair	Poor
Eisenberg(1956) ¹⁰⁾	5	22	73
Creak(1963) ¹¹⁾	17	10	73
Rutter, Greenfield, Lockyer(1967) ¹²⁾	14	25	61
Brown(1969) ¹³⁾	29	37	34
Kanner(1971) ¹⁴⁾	18	25	61
DeMyer, et al(1973) ¹⁵⁾	10	16	74
Lotter(1974) ¹⁶⁾	14	24	62
Kobayashi, Murata, Yoshinaga(1992) ¹⁷⁾	26.9	26.9	46.2

3. 자료분석

가 18), 19), 20) 가

4 7 가

가

T

1987 1990 (Paired T - test) 가 4 7 가

가 , 가 가

가

가 (ANOVA) 가

가

가

Scheffe test

연구 내용 및 방법

결 과

1. 연구대상

1987 12 1990 8

11 1990 3

가 50 (26 , 24)

1. 인구학적 특성

가 4 7

6.4±1.1 가

6.23±3.14 (1 13), 12.46

가가 ±3.56 (6 19)

Table 2

2. 연구방법

1987 12 1990 8

, 가

4 7

가

가

가

가

DSM - III - R

가

2. 초기 평가시의 자폐증상과 추적 평가시의 자폐증상의 변화에 대한 결과

가

가

가

(A),

(B),

(C)

가

1)

DSM - III - R

3가 16

' 1 ;

가

(Table 3).

' 0 ' 가

3. 초기 평가시의 자폐증상과 추적 평가시의 자폐증상의 각 항목 변화에 대한 결과

2) , , ()

Table 2. Demographic characteristics in 50 autistic subjects

	No.	No.
	First assessment	Follow-up assessment
Age		
1 - 5 year	17	
5 - 8 year	18	7
8 - 14 year	15	25
14 - 17 year		12
17 - 20 year		6
Mean ± S.D.(year)	6.23 ± 3.14	12.46 ± 3.56
Sex		
Male		44
Female		6
Treatment		
Seizure control pharmacotherapy + special education		10
Special education only		19
Psychiatric pharmacotherapy + special education		19
*missing data		2
Physical problem		
Seizure		8
Self mutilation		5
Seizure + self mutilation		4
IQ		
more than 70		8
51 - 69		7
less than 50		17

A1, A2, A3, B1, B2, B3, B4, B5, C1, C3, B6 (Table 4).

4. 치료방법에 따른 자폐증상의 호전정도를 나타낸 결과

(Group 1) 3.75, df = 2, 47, p < .05), 8 13 (Group 2), 1 5 (Group 3) (p < .05). 가 가 () 가 Table 5

Table 3. Number of symptoms by DSM-III-R at first assessment and follow-up assessment

Symptoms	First assessment	Follow-up assessment	t	p
Social interaction	3.72 ± 1.0	1.88 ± 0.9	10.99	0.000
Communication	3.58 ± 0.9	1.64 ± 1.1	9.76	0.000
Activities and interests	3.50 ± 1.1	1.92 ± 0.9	9.34	0.000
Total	10.80 ± 2.0	5.44 ± 2.3	14.27	0.000

가 (F = 4.12, df = 2, 45, p < .05). 가 Scheffe test, Group 1 Group 2가 Group 3 가 Group 1 Group 2 가 가 가 (F = 9.24, df = 2, 45, p < .01). 가 Sc-heffe test, Group 1 Group 2가 Group 3 가 Group 1 Group 2

5. 연령에 따른 자폐증상의 호전정도를 나타낸 결과

가 Table 6

(F = 3.75, df = 2, 47, p < .05), 8 13 (Group 3) 1 5 (Group 1) (p < .05). 가 가 가 가 () 가 가 (F = 4.35, df = 2, 47, p < .05), 8 13

(p<.05). 가

가

Table 4. Differences in number of symptoms by DSM-III-R between first assessment and follow-up assessment

Symptoms	First assessment		Follow-up assessment	
	(n = 50)	(%)	(n = 50)	(%)
A. Social interaction(n = 250)	186	74.4	94	37.6
A1. Lack of awareness	26	52	4	8
A2. No seeking of comfort	28	56	9	18
A3. No imitation	38	76	13	26
A4. No social play	47	94	36	72
A5. Impaired peer friendships	47	94	32	64
B. Communication(n = 300)	179	59.7	82	27.3
B1. No communication	8	16	0	0
B2. Abnormal nonverbal communication	35	70	6	12
B3. No imagination	48	96	22	44
B4. Abnormal production of speech*	44	88	21	42
B5. Abnormal form or content of speech*	32	64	15	30
B6. Impaired communication*	12	24	18	36
C. Activities and interests(n = 250)	175	70.0	96	38.4
C1. Stereotyped body movements	33	66	16	32
C2. Preoccupation with parts of objects	42	84	25	50
C3. Distress over changes	21	42	7	14
C4. Insistence on routines	33	66	23	46
C5. Restricted interests**	46	92	25	50

* : Includes only verbal subjects

** : Includes those who use toys or express interests

Table 5. Number of improved symptoms by DSM-III-R according to treatment

Symptoms	Group 1(n = 10)	Group 2(n = 19)	Group 3(n = 19)	F	p	Post hoc comparison
Social interaction	2.00 ± 0.9	2.05 ± 1.5	1.68 ± 0.8	0.51	0.60	
Communication	3.00 ± 0.9	2.26 ± 1.4	1.05 ± 1.1	9.24	0.00	1 > 3, 2 > 3(1 = 2 > 3)
Activities and interests	1.50 ± 1.5	1.84 ± 1.2	1.42 ± 1.1	0.62	0.54	
Total	6.50 ± 2.8	6.16 ± 2.8	4.16 ± 2.0	4.12	0.02	1 > 3, 2 > 3(1 = 2 > 3)

Group 1 : Seizure control pharmacotherapy + special education

Group 2 : Special education only

Group 3 : Psychiatric pharmacotherapy + special education

Table 6. Number of improved symptoms by DSM-III-R according to age

Symptoms	Group 1(n = 17)	Group 2(n = 18)	Group 3(n = 15)	F	p	Post hoc comparison
Social interaction	1.53 ± 1.0	1.78 ± 1.1	2.27 ± 1.4	1.62	0.208	
Communication	1.18 ± 1.0	2.28 ± 1.3	2.40 ± 1.6	4.35	0.018	3 > 1, 2 > 1
Activities and interests	1.41 ± 1.1	1.50 ± 1.0	1.87 ± 1.6	0.63	0.538	
Total	4.12 ± 1.9	5.56 ± 2.4	6.53 ± 3.2	3.75	0.031	3 > 1

Group 1 : 1-5 year

Group 2 : 5-8 year

Group 3 : 8-13 year

(Table 7).

7. 지능수준에 따른 자폐증상의 호전정도를 나타낸 결과

가 50 (Group 1), 50-70(Group 2), 70 (Group 3)

(Table 8).

8. 신체증상에 따른 자폐증상의 호전정도를 나타낸 결과

12 (24%)

Table 7. Number of improved symptoms by DSM-III-R according to sex

Symptoms	Male (n = 44)	Female (n = 6)	F	p
Social interaction	1.78 ± 1.1	2.33 ± 1.5	1.19	0.281
Communication	1.84 ± 1.4	2.67 ± 1.0	1.85	0.180
Activities and interests	1.57 ± 1.3	1.67 ± 0.5	0.03	0.852
Total	5.18 ± 2.7	6.67 ± 2.2	1.67	0.202

Table 8. Number of improved symptoms by DSM-III-R according to IQ

Symptoms	Group 1 (n = 17)	Group 2 (n = 7)	Group 3 (n = 8)	F	p
Social interaction	2.00 ± 1.1	1.57 ± 0.8	1.75 ± 1.7	0.34	0.717
Communication	1.53 ± 1.2	1.29 ± 1.6	1.88 ± 1.6	0.33	0.721
Activities and interests	1.06 ± 1.1	1.43 ± 1.4	1.75 ± 0.7	1.09	0.349
Total	4.59 ± 2.1	4.29 ± 2.6	5.38 ± 3.2	0.41	0.669

Group 1 : IQ < 50 Group 2 : 50 ≤ IQ < 70 Group 3 : IQ ≥ 70

Table 9. Number of improved symptoms by DSM-III-R according to physical symptom

Symptoms	Group 1 (n = 8)	Group 2 (n = 5)	Group 3 (n = 4)	Group 4 (n = 33)	F	p
Social interaction	2.00 ± 0.9	1.20 ± 1.3	2.00 ± 0.8	1.88 ± 1.3	0.56	0.647
Communication	2.25 ± 0.9	2.00 ± 1.4	3.50 ± 1.3	1.67 ± 1.4	2.38	0.082
Activities and interests	1.50 ± 1.1	1.60 ± 0.5	1.25 ± 2.1	1.64 ± 1.2	0.13	0.941
Total	5.75 ± 2.4	4.80 ± 2.6	6.75 ± 3.5	5.18 ± 2.7	0.53	0.663

Group 1 : Seizure Group 2 : Self mutilation
 Group 3 : Seizure ± self mutilation Group 4 : No above physical symptom

. Volkmar
 Klin(2000)⁵⁾ 가 가
 가 , , 2/3 가 , 1/4
 가 가 4 7 fair , 1/10
 6.4±1.1 good
 가 6.23±3.14 (2 13) ,
 가 12.46±3.56 (6 19) .
 . Popper West(1999)⁶⁾
 20 ,
 1968 , 가
 3)9) ,
 10 - 16)
 9)17)24 - 26)
 1980 가
 가 가
 6 가
 19 가
 가 가 가
 (A ; 74.4% vs 37.6%), Gillberg Steffenburg(1987)²⁴⁾
 (B ; 59.7% vs 27.3%), 23 가
 (C ; 70.0% vs 38.4%) 48% , 17%
 , 1
 A1, A2, A3 , B1, B2,
 B3, B4, B5 , C1, C3 . B6 . Kobayashi (1992)¹⁷⁾ 201
 가 가 가 가 (21.5) 가
 27.4% ,
 (Table 43.2%
 1). Paul(1987)⁸⁾
 1 2% , 5 20% (good) 가
 (nearnormal), 15 20% 가 ,
 (fair) , 60 75% (poor or 가 , 가
 very poor) 가 17). 가

4). 가 , 가 . 가 (, ,) , 가 , 가 , Szatmari 30). 가 가 . 가 , 7 , 6 , 1/4 , 1/4 가 (good) . Venter 26) 4) 58 20 가 . 가 (Total Push), 가 . Haloperidol 가 , naltrexone, lithium, psychostimulant, anticonvulsant, beta blocking agents, clonidine, fluoxetine 가 4)28)30)31) (1994)²⁷⁾ 89 A (74.2%), C (63.9%), B (56.6%) 가 , 가 28) 가 가 가 가 (ritualistic) 가 가 가 6)29) 가 3) 가 가 8 13 5 8 1 5 가 7) 가

가 . . . Lord (1982)³⁵⁾ IQ가

70

가 , 5 , , 가

가 , 가

33) 가

4-8)33)

가

가

(latency)

9). Jacobson Ackerman

(1990)³²⁾ 가

(daily living skills)

5 12

가

가

1/3

가 30). 43.2%가 17) 5)36)37)

가 33). 가

5). 가

6) 가 24%

가

가

가

가

Tsai 가

(1981)³⁴⁾ 가

DSM - IV³⁾ 4 5 가

■ 감사의 글

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A FOUR TO SEVEN YEAR FOLLOW-UP STUDY OF SYMPTOMS OF AUTISTIC CHILDREN IN TAEGU AND KYUNGPOOK PROVINCE

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This study evaluated the improvement of autistic symptoms during the 4 -7 year follow-up in autistic children. Fifty subjects (44 males and 6 females whose age ranged between one to 13 years) diagnosed with DSM-III-R autistic disorder were included in this study. Their autistic symptoms were assessed with DSM-III-R diagnostic criteria of autistic disorder (grouped as A, B and C which include 5, 6 and 5 items respectively). The mean of follow-up duration was 6.4 ± 1.1 years. Symptoms between baseline and follow-up were examined according to treatment types, age, sex, IQ and physical problems of them were identified.

There were statistically significant decreases of symptom items at follow-up as a whole and A, B and C, respectively. The most symptom decrease occurred in communication and followed social interaction, and activities and interests at follow-up assessment. Symptom items that decreased more than 50% at follow-up evaluation include A1, A2, A3 and B1, B2, B3, B4, B5, and C1, C3. Groups with special education only and combined treatment of special education and seizure pharmacotherapy showed better improvement of symptoms than the group with psychiatric pharmacotherapy with special education. Age was a significant factors in the improvement of symptoms.

The author concluded that some autistic children improved with aging, therefore they should be treated actively with special education, pharmacotherapy and other scientific methods.

KEY WORDS : Autistic disorder · Symptom · Follow-up study.