

정신분열병 환자를 위한 인지재활훈련 프로그램의 개발\*

- 한국형 인지분화훈련 프로그램 -

이만홍<sup>1)</sup> · 이희상<sup>1)</sup> · 조현상<sup>1)</sup> · 안석균<sup>1)†</sup> · 현명호<sup>2)</sup> · 김태용<sup>1)</sup>  
 김장우<sup>1)</sup> · 최충식<sup>3)</sup> · 이연희<sup>1)</sup> · 송선미<sup>1)</sup> · 유계준<sup>1)</sup>

Development of a Cognitive Rehabilitation Program  
 for Patients with Schizophrenia\*

- Korean Cognitive Differentiation Program -

Man Hong Lee, M.D.,<sup>1)</sup> Hee Sang Lee, M.D.,<sup>1)</sup> Hyun Sang Cho, M.D.,<sup>1)</sup>  
 Suk Kyoon An, M.D.,<sup>1)†</sup> Myoung Ho Hyun, Ph.D.,<sup>2)</sup> Tae-Yong Kim, M.D.,<sup>1)</sup>  
 Jang Woo Kim, M.D.,<sup>1)</sup> Chung Shik Choi, M.D.,<sup>3)</sup> Yeon-Hee Lee, M.A.,<sup>1)</sup>  
 Seon-Mi Song, R.N.,<sup>1)</sup> Kae Joon Yoo, M.D.<sup>1)</sup>

국문초록

연구목적 :

방 법 :

28 (n=14) (n=14)  
 1 60 , 2 , 11 22 K-WAIS  
 가 . 가

: 1998 9 30

: 1998 12 30

1996

1998

41

<sup>1)</sup> Department of Psychiatry, College of Medicine, Yonsei University, Seoul

<sup>2)</sup>

Department of Psychology, Woosuk University, North Chonlla Province, Chonju

<sup>3)</sup>

Department of Psychiatry, Keyo Hospital, Uiwang

<sup>†</sup>Corresponding author

결 과 :

결 론 :

중심 단어 :

서 론

program) <sup>1)9)</sup>

<sup>10)</sup>

<sup>1-4)</sup> 가 , , Bre- (In-  
 integrated Psychological Therapy) 가  
 (schemata) . Brenner <sup>5)</sup>

<sup>5)</sup>

가

가

<sup>6)7)</sup>

가

가 <sup>6)</sup> -  
 (Cognitive Differentiation), (Social Perception), (Verbal Communication), (Social Skills), (Interper-  
 sonal Problem Solving) -

가 <sup>5)</sup>

가 <sup>8)9)</sup> (shifting attention),  
 (macro level) (psychosocial (sustained focused attention)

(stimuli abstraction), (concept for -  
 mation), (concept discrimination),  
 (concept modulation), (concept  
 recall) (conceptualization)  
 (card sorting  
 exercise) (verbal concept exercise)

가  
 (object guessing exercise)

5)11)

1

11 - 18)

## 연구대상 및 방법

16)

### 1. 연구대상

DSM - IV<sup>19)</sup>

32

가

16)

12

가

6

6

18)

8

12

가

16)

18)

18)

가

2

14

14

### 2. 연구방법

15)

(trait factor)

(state factor)

#### 1) 한국형 인지분화훈련 프로그램의 개발 과정

( )

Brenner

1996

1997

1

(conceptual hierarchies exercise), (synonyms exercise), (antonyms exercise), (word definition exercise), (word clue exercise) (context-dependent word exercise) (1).<sup>5)11)</sup>

1

가

Brenner

10

3 가

가

가

가

가

2) 한국형 인지분화훈련 프로그램의 적용

1 1

가

2 11

22

가

2

2

가 )

( ,

20)

( 1).

3) 인지기능, 정신병리 및 문제해결기술의 측정

1

1 (arithmetic), (similarities), (vocabulary), (picture completion) K - WAIS<sup>21)</sup>

POS PSSS SPSI POS , PSSS SPSI POS , PSSS SPSI 0.83, 0.88, 0.87 0.94, 0.92, 0.94

22) (Positive and Negative Syndrome Scale, PANSS)<sup>23)</sup>

24) SPSI POS 21 , PSSS SPSI 0.92<sup>25)</sup>

3. 연구설계 및 통계

가 (1 가 1 가 30 Spearman 0.73(p=0.001), 0.74(p=0.002), 0.56(p=0.03) PANSS 가

KWAIS , PANSS (POS), SPSI (PSSS)

가 가 PANSS (Social Problem - Solving Inventory, SPSI)<sup>24)</sup> ( 2)<sup>25)</sup> 가

(repeated measures Analysis of Variance) 0.05 SPSS for WIN (version 6.0)

결 과

SPSI (Problem Orientation Scale, POS) (Problem - Solving Skill Scale, PSSS) 가 , PSSS

1 (chlorpromazine equivalent dose) t- (in - dependent t - test) 2 ( 1).

가 SPSI POS 30 , PSSS 40 5 POS PSSS

1. 한국형 인지분화훈련이 정신분열병 환자의 인지기능에 미치는 효과 K - WAIS POS 2

**Table 1.** Demographic and clinical profiles between training and control group<sup>a</sup>

	Training group (n = 14)		Control group (n = 14)		t
Sex(male/female) <sup>2</sup>	6/8		7/7		
Age(years)	34.3 ±	6.1	34.0 ±	8.2	- 0.10
Education(years)	11.1 ±	2.0	12.8 ±	2.5	2.00
Onset age(years)	25.1 ±	5.0	23.3 ±	6.7	- 0.80
Illness duration(months)	110.6 ±	85.5	128.6 ±	63.8	0.63
Chlorpromazine equivalents(mg)	916.4 ±	664.6	666.3 ±	418.0	- 1.19

a : Values are mean ± standard deviation      2 : <sup>2</sup> test : <sup>2</sup> = 0.144, p = 0.71

**Table 2.** Comparisons of pre- and post-treatment cognitive function mean between training and control group<sup>a</sup>

Tests <sup>b</sup>	Cognitive function mean				p-value determined by RMANOVA <sup>c</sup>		
	Training group (n = 14)		Control group (n = 14)		Groups(A)	Training(B)	A × B
	Pre-	Post-	Pre-	Post-			
Arithmetic	6.79 ± 2.29	8.92 ± 2.06	8.43 ± 2.13	9.00 ± 2.69	N.S.	<0.05	<0.05
Vocabulary	8.14 ± 2.06	9.29 ± 3.05	9.21 ± 2.51	10.14 ± 2.60	N.S.	N.S.	N.S.
Similarities	8.07 ± 2.65	10.43 ± 2.90	9.50 ± 2.79	11.00 ± 2.29	N.S.	<0.05	N.S.
Picture completion	7.50 ± 3.30	8.64 ± 3.70	7.43 ± 1.22	8.36 ± 2.13	N.S.	<0.05	N.S.

a : Values are mean ± standard deviation  
 b : Tests are subtests of Korean-Wechsler Intelligence Scale  
 c : RMANOVA indicates repeated measures Analysis of Variance

**Table 3.** Comparisons of pre- and post-treatment psychopathology mean between training and control group<sup>a</sup>

PANSS <sup>b</sup>	Psychopathology mean				p-value determined by RMANOVA <sup>c</sup>		
	Training group (n = 14)		Control group (n = 14)		Groups(A)	Training(B)	A × B
	Pre-	Post-	Pre-	Post-			
Positive	20.14 ± 6.35	16.14 ± 5.84	8.43 ± 2.13	9.00 ± 2.69	N.S.	<0.05	N.S.
Negative	20.29 ± 6.72	16.43 ± 3.90	18.43 ± 6.14	15.57 ± 6.22	N.S.	<0.05	N.S.
General psychopathology	34.86 ± 8.51	28.79 ± 5.65	35.00 ± 10.15	31.00 ± 8.58	N.S.	<0.05	N.S.

a : Values are mean ± standard deviation  
 b : Summation of positive, negative, and general psychopathology scales of Positive and Negative Syndrome Scale(PANSS ; Kay et al 1987)  
 c : RMANOVA indicates repeated measures Analysis of Variance

(F = 6.35, df = 1, p = 0.018).

3. 한국형 인지분화훈련이 정신분열병 환자의 문제해결기술에 미치는 효과

SPSI, POS, PSSS, PANSS

SPSI (F = 6.35, df = 1, p = 0.018), PSSS (F = 4.88, df = 1, p = 0.036), POS

2. 한국형 인지분화훈련이 정신분열병 환자의 정신병리에 미치는 효과

3

고찰

Brenner <sup>5)</sup>







- functioning in patients with schizophrenia, an overview. In : Psychopharmacology, 4th ed. Ed by Bloom FE, Kupfer DJ, New York, NY, Raven Press, pp1245-1257
- 4) **Nuechterlein KH, Dawson ME**(1984) : Information processing and attentional functioning in the developmental course of schizophrenic disorders. Schizophr Bull 10 : 160-203
  - 5) **Brenner H, Roder V, Hodel B, Kienzle N, Reed D, Liberman R**(1994) : Integrated Psychological Therapy for Schizophrenic Patients. Germany, Hogrefe & Huber Publishers, pp13-34, pp35-41, pp60-66, pp101-108
  - 6) 이희상, 안석균, 이만홍(1998) : 정신분열병의 인지재활. 신경정신의학 37 : 203-214
  - 7) **Storzbach DM, Corrigan PW**(1996) : Cognitive rehabilitation for schizophrenia. In : Cognitive Rehabilitation for Neuropsychiatric Disorders. Ed by Corrigan PW, Yudofsky SC, Washington, DC, American Psychiatric Press, pp299-328
  - 8) **Hodel B, Brenner HD**(1994) : Cognitive therapy with schizophrenic patients : Conceptual basis, present state, future directions. Acta Psychiatr Scand 90 (suppl) : 108-115
  - 9) **Spring BJ, Ravdin L**(1992) : Cognitive remediation in schizophrenia : Should we attempt it? Schizophr Bull 18 : 15-20
  - 10) 이만홍, 안석균(1998) : 정신분열병의 치료 : 새로운 출발을 향한 변화의 시대. 대한신경정신의학회 1998년도 춘계학술대회. 경주, 대한신경정신의학회, pp181-189
  - 11) 이만홍, 이희상, 조현상, 현명호, 유상우, 안석균, 현용호, 한승진, 박지환, 구민성, 손석한, 김세주, 정기립, 송선미, 안혜리, 이현주, 이연희, 최정아(1996) : 정신분열병의 통합심리치료 실행 지침서. 1판, 서울, 하나의학사, pp17-30
  - 12) 안석균, 손석한, 이만홍, 이희상, 안혜리(1998) : 정신분열증 환자의 인지재활을 위한 사회지각척도의 개발. 신경정신의학 37 : 261-272
  - 13) 이만홍, 이희상, 조현상, 오태성, 육기환, 유상우, 안석균, 현용호, 한승진, 조은영, 안혜리(1996) : 정신분열병 환자를 위한 인지재활과 사회기술훈련의 체계적인 통합심리치료. 1판, 서울, 하나의학사, pp55-62, pp91-100, pp157-168
  - 14) 이만홍, 이희상, 조현상, 현명호, 유상우, 안석균, 현용호, 한승진, 박지환, 구민성, 손석한, 김세주, 정기립, 송선미, 안혜리, 이현주, 이연희, 최정아(1996) : 정신분열병의 통합심리치료를 위한 정신분열병 환자의 종합평가 지침서. 1판, 서울, 하나의학사, pp8-13
  - 15) 이만홍, 조현상, 이희상, 현명호, 안석균, 한승진, 현용호, 구민성, 김세주, 이연희, 송선미, 이현주, 최정아(1997) : 정신분열증 환자에 대한 통합심리치료 : 1년간의 경험 - 그 제한점과 향후 방향. 대한신경정신의학회 1997년도 추계학술대회, 서울, 대한신경정신의학회, pp58
  - 16) 이만홍, 이희상, 조현상, 현명호, 안석균, 유상우, 박지환, 한승진, 현용호, 구민성, 손석한, 김세주, 이현주, 박소라, 송선미, 안혜리, 최정아, 남궁기, 유계준(1998) : 정신분열병 환자에 대한 통합심리치료의 효과. 신경정신의학 37 : 1074-1886
  - 17) 이희상, 이만홍(1996) : 정신분열증 환자에 대한 통합심리치료 경험. 한국정신사회재활협회 1996년도 추계학술대회, 부산, 한국정신사회재활협회, pp27-28
  - 18) 이희상, 현명호, 조현상, 이연희, 김태용, 장순아, 노규식, 정기립, 이만홍, 유계준(1998) : 통합심리치료의 인지분화훈련이 정신분열병 환자의 기초 인지기능에 미치는 영향. 신경정신의학 37 : 801-810
  - 19) **American Psychiatric Association**(1994) : Diagnostic and Statistical Manual of Mental Disorder. 4th ed, Washington, DC, American Psychiatric Association, pp273-290
  - 20) 오병훈, 김도훈, 안석균, 유상우, 임정아, 이현주(1996) : 알기 쉽게 보는 정신분열병. 서울, 중앙문화진수출판사, pp91-100
  - 21) 임상심리학회(1992) : K-WAIS 실시요강. 서울, 한국가이던스
  - 22) 박영숙(1994) : 심리평가의 실제. 서울, 하나의학사, pp115-209
  - 23) **Kay SR, Fiszbein A, Opler LA**(1987) : The positive and negative syndrome scale for schizophrenia. Schizophr Bull 13 : 261-272
  - 24) **D'Zurilla TJ, Nezu AM**(1992) : Development and preliminary evaluation of the Social Problem-Solving Inventory. Psychol Assess 2 : 156-163
  - 25) 박소라(1998) : 정신분열병 환자와 가족을 위한 문제해결훈련 프로그램에 관한 연구(석사학위). 숭실대학원
  - 26) **Spaulding WD, Reed D, Poland J, Storzbach DM**(1996) : Cognitive deficits in psychotic disorders. In : Cognitive Rehabilitation for Neuropsychiatric Disorders. Ed by Corrigan PW, Yudofsky SC, Washington, DC, American Psychiatric Press, pp129-166
  - 27) **Roder V**(1988) : Untersuchungen zur Effektivität ko-

- gnitiver Therapieinterventionen mit schizophrenen Patienten. Unpublished dissertation, Universitt Bern, Switzerland Cited from Brenner HD, Hirsbrunner A, Heimberg D(1997) : Integrated psychological therapy program : training in cognitive and social skills for schizophrenic patients. In : Cognitive Rehabilitation for Neuropsychiatric Disorders. Ed by Corrigan PW, Yudofsky SC, Washington, DC, American Psychiatric Press, pp329-348
- 28) 안석균, 오병훈, 현명호, 유계준(1997) : 만성 정신분열병 환자에서 전산화 인지재활프로그램(RE-HACOM)을 이용한 주의력 훈련의 효과. 신경정신의학 36 : 72-79
- 29) **Green MF**(1993) : Cognitive remediation in schizophrenia : is it time yet?. Am J Psychiatry 150 : 178-187
- 30) **Goldberg TE, Weinberger DR**(1994) : Schizophrenia, training paradigms, and the Wisconsin Card Sorting Test redux. Schizophr Res 11 : 291-296
- 31) **Brenner HD, Hirsbrunner A, Heimberg D**(1997) : Integrated psychological therapy program : training in cognitive and social skills for schizophrenic patients. In : Cognitive Rehabilitation for Neuropsychiatric Disorders. Ed by Corrigan PW, Yudofsky SC, Washington, DC, American Psychiatric Press, pp329-348

## **Development of a Cognitive Rehabilitation Program for Patients with Schizophrenia**

**Man Hong Lee, M.D., Hee Sang Lee, M.D., Hyun Sang Cho, M.D.,  
Suk Kyoon An, M.D., Myoung Ho Hyun, Ph.D., Tae-Yong Kim, M.D.,  
Jang Woo Kim, M.D., Chung Shik Choi, M.D., Yeon-Hee Lee, M.A.,  
Seon-Mi Song, R.N., Kae Joon Yoo, M.D.**

*Department of Psychiatry, College of Medicine, Yonsei University, Seoul*

**Objects :** The purpose of this study was to investigate the effects of cognitive differentiation training program-Korean version(a training program of attention and conceptual abilities) on cognitive function, psychopathology and problem solving skills in patients with schizophrenia.

**Methods :** A total of patients diagnosed as schizophrenia using DSM-IV were randomly assigned to 2 groups. The training group went through a total of 22 sessions of cognitive differentiation training (60min/session  $\times$  2sessions/wk  $\times$  11wks). The attention-placebo control group received psychoeducation program during the same period. Arithmetic, vocabulary, similarities, picture completion of Wechsler Adult Intelligence Scale-Korean version, Positive and Negative Syndrome Scale, and Social Problem Solving Scales were administered to all patients, both before and after the training program.

**Results :** In the arithmetic scores ( $F = 6.35$ ,  $af = 1$ ,  $p = 0.018$ ) of Wechsler Adult Intelligence Scale-Korean version, and total scores ( $F = 6.35$ ,  $af = 1$ ,  $p = 0.018$ ) and problem solving skill scale scores ( $F = 4.88$ ,  $af = 1$ ,  $p = 0.036$ ) of social problem solving scale, interaction effects of training was significant.

**Conclusion :** Our findings suggest that cognitive differentiation training program-Korean version is effective on improving auditory attention and problem solving skills in patients with schizophrenia.

**KEY WORDS :** Cognitive differentiation training program-Korean version · Schizophrenia · Cognitive rehabilitation · Integrated psychological therapy.

□부    록 1 □

1. 개념 위계 연습의 한 예

: , , ,  
 : , , , , ,  
 : , , ,  
 : , , , , , ,

2. 십자말 풀이 연습의 한 예

	2		3	4		
1				7	8	
	5	6				
		9	10			
12	13		11			

( ) 가

1.                    (        :        )
3.                    (                    : 醫師 - 意思 - 義死)
5.                    (        :        )
7.                    ,                    ,
9. 가                    가
11.                    (        : 溫井)
- 13.

( )

2.                    (        :        )
4.                    (                    :        (        ) - 謝過)
6. 가                    ,
- (                    : 湖水 : 戶數)
8. 가                    , (                    : 首都 - 水道 - 修道)
10.                    (        - 高溫)
- 12.

( )

1	2	3	4	5	6	7	8
9	10	11	12	13			

