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ORIGINAL ARTICLE

Study of Treatments and their Effects on Behaviour Improvement of Children with Problem Behaviour such as ADHD¹

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ABSTRACT

This study tried to verify effectiveness of treatments for children who received Early Intervention Service (EIS) for children with problem behaviour. The research evaluated the validity of treatment service in improvement of problem behaviour in the areas of internalizing, externalizing, attention and sociality, and verified differences of effectiveness between methods of treatment. One hundred and ninety seven children participated in this study. They received the treatment services from 5 different branches of H Center, specialized center for emotional and psychological treatment, which was providing EIS on problem behaviour. According to the analysis of pre-post test on problem behaviours, the treatment which EIS centre provided had positive influence on behaviours change of object children, especially Play Therapy and Art Therapy made greater improvement of children's behaviours. These results suggest the need of continuous study and development in intervention programs related to Play Therapy and Art Therapy.

< Key-words >

early intervention service, behaviour problem, art therapy, play therapy, internalizing, externalizing

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I . Introduction

Catching up rapidly changing society, social welfare service faces a lot of changes. Since mid 2000, due to changes in family structure such as low birth rate and aging, and growing income polarization, demand for welfare not only for vulnerable social class but also all other social classes is growing. As a effective alternative to tackle this issue, universal social service was suggested (Han, 2012) Since August 2007, the Korean Ministry of Health & Welfare has been enforcing community social service investment aiming at developing social services reflecting regional conditions and needs and creating good quality jobs (Seoul Welfare Foundation, 2012).

The number of users of Early Intervention Service (EIS) for children with problem behaviour, one of the community social service investment program, which started from 2007, has been increasing from 61,150 in 2007 to 62,619 in 2009 (National Health Insurance Service, 2010). In Seoul, 91 institutions from 13 districts (52%) are engaged in this service, show high share of participation (up to June 2012).

Generally the problem behaviour is defined as the behaviour which transgress ordinary control of parents or teachers and causes difficulties, which do not fit in normative behaviour based on age or which cannot be considered to have normal ability to adapt (Baek, Hwang, 2006), and it is divided into two types: *internalizing problems* and *externalizing problems* (Seoul Welfare Foundation, 2012). More specifically, *internalizing problem* means passive and socially internalized and overly controlled behaviour (Achenbach, 1991; Patricia, 2012). It shows social withdrawal such as preference of staying alone or being too shy to speak, evasion and negative attitude. It also displays physical symptoms such as dizziness and headache and feeling emotionally depressed, overly anxious and being too nervous (Oh, Ha, Lee et al., 2001). *Externalizing problem* means uncontrolled behaviours resulted from the lack of appropriate control over emotions and behaviour (Achenbach, 1983), it also displays damaging behaviour toward other people, aggressiveness, fights and delinquency (Oh, Ha, Lee et al., 2001).

Recently, because of increasing number of children with problem behaviour, attention on it is growing, so active researches on therapeutic intervention and its efficiency are undergoing. Shin & Kim(2009) indicates that group art therapy program made improvement of high risk children showing problem behaviour that negatively effects on obtaining their social capability. Waller(2006) examined effect of art therapy on leadership. As a result, it was reported that as children newly recognise and understand their surroundings through art therapy, their leadership and self esteem were improved.

According to Lee & Kim(2000), the result shows that self-cognition, anger-management, problem-solving ability have been improved by cognitive-behaviour group therapy for ADHD children. Also, Satterfield (1994) reported that social skill training is important for ADHD children who display symptom of conduct disorder to improve social skills.

EIS for the children with problem behaviour are providing services such as Speech

Therapy (ST), Play Therapy (PT), Cognitive Therapy (CT) and Art Therapy (AT) (Seoul Welfare Foundation, 2012). Even though EIS for children with problem behaviour provide various therapy services, there has been not enough verification on effectiveness about improvement of object children's behaviours. To provide appropriate therapy service which fits in object children's characteristics, it is necessary to examine individual treatment service and its effects on behaviour and emotional problems of the object children.

Accordingly, the purpose of this study is that, to invest the effects of therapies on problem behaviours such as *internalization*, *externalization*, *attention problem* and *social problem* (Achenbach, 1991), and to examine the different effectiveness between the outcomes of the various therapies.

Meanwhile, children's problem behaviour is more affected by social and home environments than biological factor, and its characteristics are not static but flexible and changeable as they are still in development process. Therefore, it is desirable to examine closely into children's developmental characteristics and behaviours, find the problems based on present condition and approach to prevent aggravation of the condition.

II. Materials & Method

1. Subjects

Subjects of this study were children who were receiving EIS from 5 branches of H center, specialized center for emotional and psychological treatment. H centre is providing community social service investment program of the Korea Ministry of Health and Welfare. Total 197 participants, 78 were from N branch, 30 from I branch, 24 from S branch, 13 from M branch and 52 from K branch, had behaviour problems (ADHD, defiance/conduct disorder etc.) or emotional problems (depression/anxiety, attachment disorder etc.).

2. Problem behaviour

Problem behaviour was observed and assessed by therapist, measured with simplified criterion based on Korea-Chil behaviour check List(K-CBCL). Chil behaviour check List was developed by Achenbach & Edelbrock (1983) and Oh, Lee, Hong et al. translated it into Korean and standardized as K-CBCL (1997). Duration of treatment(duration of observation) was from 6 months to one year. K-CBCL has some difficulties to be used in assessment field because it is composed with social ability scale and problem behaviour syndrome scale, contains too many questions and requires subjective statements. In that reason, this study used simplified problem behaviour scale which was developed by Hanshin Plus care (2011) containing only 12 questions under 4 subareas (internalizing, externalizing, attention disorder and social disorder) (Table1). Each question was scored

by 1 to 10 Likert type scale.

<Table1> Simplified problem behaviour scale

Internalizing	1	This child has high level internalizing (depression, anxiety and somatisation) problem.
	2	This child displays depressive feeling and low self esteem.
	3	This child's level of anxiety is quite high.
Externalizing	4	This child has high level externalizing problem (conduct disorder, aggression).
	5	This child has tendency to show aggression to the peer.
	6	This child tends to show defiant expressions toward teachers and other adults.
Attention	7	This child has high lever problem on focusing attention.
	8	This child has lack of attention sitting absent minded or daydreaming.
	9	This child is easily distracted and shows hyperactivity.
Sociality	10	This child has problem in sociality.
	11	This child tends to be withdrawn because of lack of social skill,.
	12	This child tends to do inappropriate behaviours due to poor social skill.

Source: K-CBCL, Hanshin Plus care (2011)

3. Diagnosis and choosing therapy

In EIS, children are subject to receive one of the therapies among PT, AT, ST and CT for one year according to the characteristics of problem behaviours. The objective children usually undergo full test battery, and the types of therapy were chosen according to the result of the test and counselling with parents. In choosing of the types of therapy, suggest of and intervention direction proposed in the result of the test were chosen on the preferential basis. For example, for ADHD, which marks the highest position of the causes of behaviour problems in diagnosis of children's problem behaviours, PT was chosen to solve externalizing problem and to improve attention and sociality. When borderline intelligence was found to be the cause, CT was chosen as a primary treatment. Among emotional problems, depression and anxiety occupied the highest proportion, so AT was preferentially chosen to improve internalizing problem behaviours. It is because that AT can provide emotional stability and teach the positive ways of self-expression. Meanwhile, for the children who did not take the full test battery, previously conducted tests and results, requests from teachers and parents counselling reports were used as a basis of prioritising the problems between emotional and behaviours, and accordingly the type of the therapy was determined. In choosing of the treatment therapy, parents'

opinions and desires were reflected as much as possible, and all the therapies were conducted under parents' agreements.

4. Therapy program

PT, AT, ST and CT were carried out for 50 minute, once a week, from it 40 minutes were designated to treat children and 10 minutes were to counsel with their parents. Each program was redeveloped, by individual area's treatment experts, clinical counsellors and special education teachers, to be appropriate to individual characteristic of child according to FTB and preliminary examinations conducted. This adaptation was based on EIS manual for children with problem behaviours (Lee et al. 2010) and Seoul city EIS manual (Seoul Welfare Foundation, 2011), and developed to be applied to each problem areas. Basic treatment protocols used in AT and CT are shown in Table2 and Table3.

<Table2> Children with internalizing problem – psychological and emotional program utilizing Art Therapy (basic)

Stage	Theme	Main activity	Purpose	Tools
Initial stage	Free drawing	Drawing things clients want to express without being giving specific theme	To identify clients' present thought, desired, emotion etc.	Drawing paper(quarto paper, folio paper), crayons, felt pens
	KFD (Kinetic Family Drawing)	Clients draw their family members and what they are doing	To understand clients self recognition in family and how they are aware of their family members	A4 paper, pencils(4B), erasers
	Angel clay work	After handling and feeling angel clay(light weight clay) as much as clients want, they are asked to make anything they like	To express clients' inner selves, to release tension and to cause interest	Angel clay, carving tools, news paper, felt pens(when applied in small amount to clay then knead)
	Scribble	Scribble lines and curves without restriction, picture imagines by looking at the paper from various directions then colour them to make defined shapes	To express subconscious, to reduce feeling of rebellion and to build feeling of closeness	Paper(A4 or A2), pencils, crayons, colouring pencils, felt pens
	Finger painting	Express themselves by putting paint and paper into gruel	To release anxiety and tension	Water, gruel, paper, paint, news paper

Middle stage	Mandala	Colour mandalas using tools or draw their own mandalas	To express emotions and to understand other people's feeling	Paper(A3), colouring pencils, felt pens, crayons
	Expressing emotions	Draw three different faces(happy face, sad face and angry face) then write about them	To understand emotions and to express them	Paper(A3), colouring pencils, crayons
	Trash can of emotions	Write things in inner self such as anger, stress and something to get rid of on A4 paper. Rip newspaper to express negative emotions and stress then put ripped news paper into a box. Write their feelings on the box	To express emotions and to reduce depression To form positive self image	A4 paper, news paper, colouring pencils, felt pens, box
	Draw around hands	Draw clients' each hands then write or draw their merits on their right hand and demerits left	To improve self acceptance and self express, and to understand others	A4 paper, colouring pencils, felt pens
	Draw my appearance and inner image	Understand clients themselves accurately by drawing their image from other people's view points and their owns	To improve self expression and self awareness	Paper(A3), colouring pencils, felt pens, crayons
	Draw around body	Clients lies on whole size paper and someone draws around their body. Then clients decorate their out lined body with their own strength and merits	To find their own merits and strength To improve self esteem and confidence	Whole size paper, colouring pencils, felt pens, crayons, magazine, scissors, glue
	Articulate something strengthen me	Divide A4 into 9 columns, fill them with something strengthen themselves by drawings and writings	To establish positive attitude about future	A4 paper, colouring pencils, crayons

Source: Hanshin Plus care (2011)

<Table3> Children with attention problem – Cognitive Therapy program to improve attention (basic)

Stage	Purpose of activity	Activities	Tools
1	To measure auditory attentiveness, visual attentiveness, power of restraint(control), level of arousal, cognitive flexibility, working memory capacity and its process by using action observation and result of tests	-Assess attentiveness Stroop test, CCTT(Children's Color Trails Test), E-CFT(Executive-Complex Figure Test of Rey), WISC-III(Wechsler Scale of Intelligence- III): arithmetic, numbers, symbol, similarity and maze	Test tools, A4 paper, pencils, erasers, felt pens, stopwatch
2	To learn means to complete a task within limited time To apply 4 steps of THINK ALOUD method	-Learn 4 steps of THINK ALOUD	Pictures of 4 steps of THINK ALOUD, colouring pencils, colouring sheets, stopwatch
3	To improve auditory attentiveness and visual attentiveness by using programs designed to improve both attentiveness To apply 4 steps of THINK ALOUD method	-Ka Na Da puzzle(Korean lettering puzzle) -colour card game	Ka Na Da puzzle, coloured paper, stopwatch
4	To improve auditory attentiveness and visual attentiveness by using programs designed to improve both attentiveness To apply 4 steps of THINK ALOUD method	-Ka Na Da puzzle(Korean lettering puzzle) -colour card game -clapping while listen to a story	Ka Na Da puzzle, coloured paper, stopwatch
5	To improve auditory attentiveness and visual attentiveness by using programs designed to improve both attentiveness To apply 4 steps of THINK ALOUD method	-Find the differences/find same pictures -Check after listening to news	Activity paper, pencils, erasers, stopwatch
6	To improve auditory attentiveness and visual attentiveness by using programs designed to improve both attentiveness	-Find the differences/find same pictures -Check after listening to news	Activity paper, pencils, erasers, stopwatch
7	To improve power of restrain, level of arousal and cognitive flexibility by using programs	-Blue flag, white flag -maze -Coding sheet	Activity paper, pencils, erasers,

	designed to improve those abilities To apply 4 steps of THINK ALOUD method	-Colour Naming	stopwatch, blue flag, white flag
8	To improve power of restrain, level of arousal and cognitive flexibility by using programs designed to improve those abilities To apply 4 steps of THINK ALOUD method	-Blue flag, white flag -maze -Coding sheet -Colour Naming	Activity paper, pencils, erasers, stopwatch, blue flag, white flag
9	To improve ability to plan and execute by using programs designed to improve those abilities To apply 4 steps of THINK ALOUD method	-Cooking activity -Logic puzzle	Ingredients and tools for cooking, game tools for logic puzzle
10	To improve ability to plan and execute by using programs designed to improve those abilities To apply 4 steps of THINK ALOUD method	-Logic puzzle -Sudoku -Hanoi tower	Game tools for logic puzzle, Hanoi tower and Sudoku
11	To improve ability to plan and execute by using programs designed to improve those abilities To apply 4 steps of THINK ALOUD method	-Sudoku -Hanoi tower	Game tools for Hanoi tower and Sudoku
12	To think and learn how to apply the methods clients learned into home and school situations To evaluate process of treatment and assess their own behaviours	-Simple assess of attentiveness -Closing party -Evaluating treatments	Assess paper, A4 paper, pens, stopwatch, Snack, drink

Source: Hanshin Plus care (2011)

5. Analysis

To validate the difference of problem behaviour measurement point between pre and post test, Paired t-test was carried out. SPSS 18.0 program was used to analyses the data. Significant level for statistic analysis was set in $p < 0.05$ level.

III. Results

1. General characteristics

Average age of the participants, who were objected to EIS for problem behaviour, for this study, was 9.6 ± 3 , and their general characteristics are shown in Table 4. The portions of males to females were males 75.6% and female 24.4%. In terms of economic

condition, 62.4 % were from normal, 19.3% beneficiaries and 18.3% the near poor. 55.3% of the participants had taken full test battery.

<Table4> General characteristics of Participants

		n=197
Variable	division	The number of participants(%)
Gender	Male	149(75.6)
	Female	48(24.4)
Grade in school	Infant/toddler	53(26.9)
	Grade 1,2,3, in elementary	73(37.1)
	Grade 4,5,6 in elementary	47(23.9)
Economic condition	Above middle school	24(12.1)
	Normal	123(62.4)
	Beneficiaries	36(19.3)
Full test battery	The near poor	38(18.3)
	Taken	109(55.3)
	Not taken	88(44.7)

Most of the participants were diagnosed depression/anxiety (29.4%) and ADHD (28.9%), followed by borderline intelligence (including mild intellectual disability) forming 14.2%, defiance/conduct disorder 7.6%, delayed language development (articulation etc.) 7.1% and attachment disorder 5.6%. In addition to that, sociality problem (peer problem etc.), autistic spectrum (including Asperger's syndrome) and others (encopresis, mutism and tic disorder) were shown in order. In this study, ADHD, borderline intelligence, defiance/conduct disorder, sociality disorder and autistic spectrum were classified as behaviour problem, and delayed language development, depression/anxiety, attachment disorder and others emotional problem.

The number of participants who were receiving AT among therapy services provided by EIS for Children with Problem Behaviour, taking up 44.2%, the next was PT 35.5%, and ST 11.2% and CT 9.1% were followed.

Most of participants diagnosed with behaviour problem were receiving PT (23.4%) and AT (21.8%), and participants with emotional problem were receiving mainly AT (22.4%) (Table5).

<Table5> Treatment present condition for individual diagnosis

n=197

Variable	Diagnosis	
	Behaviour problem	Emotional problem
Treatment		
	Play	46
	Speech	8
	Art	43
	Cognitive	15
		24
		14
		44
		3

2. Changes of problem behaviour level

Changes of problem behaviour between pre-post treatments were analysed with paired t-test, and the verification result shows significant decrease of individual problem behaviour such as internalizing, externalizing, attention and sociality ($p < 0.05$).

Changes of problem behaviour between pre-post treatments were analysed with paired t-test. The validation was conducted on 78 children with behaviour problem. The verification result presents significant decrease of behaviour problems such as internalizing, externalizing, attention and sociality ($p < 0.05$).

Taking the objects receiving PT among behaviour problem children, verification result of treatment effect were analysed as that problem behaviour levels were significantly reduced with 99% confidence level. They were specifically shown in the areas of internalizing ($t=4.870$), externalizing ($t=4.905$), attention ($t=7.828$) and sociality ($t=4.197$) and whole area ($t=7.544$). In the same manner, among behaviour problem children, children who were receiving AT were the objects of verification result of treatment effect. Analysis shows that in the areas of internalizing ($t=3.170$), externalizing ($t=2.265$), attention ($t=2.183$) and sociality ($t=3.741$) and whole area ($t=3.284$), problem behaviour levels were significantly reduced with 95% confidence level.

Changes of problem behaviour between pre-post treatments were analysed with paired t-test. The validation was conducted on 53 children with emotional problem. The verification result presents significant decrease of emotional problems such as internalizing, externalizing, attention and sociality ($p < 0.05$).

Among emotional problem children, children who were receiving PT were the objects of verification result of treatment effect. Analysis shows that in the areas of internalizing ($t=5.102$), externalizing ($t=3.804$), attention ($t=3.505$) and sociality ($t=6.413$) and whole area ($t=5.723$), problem behaviour levels were significantly reduced with 99% confidence level.

Among emotional problem children, children who were receiving AT were the objects of verification result of treatment effect. Analysis shows that except sociality ($t=1.809$), in the areas of internalizing ($t=2.197$), externalizing ($t=2.172$) and attention ($t=2.677$) and

whole area ($t=3.178$), the level for problem behaviour were significantly reduced with 95% confidence level. Only sociality area could not present significant difference. (Table6).

<Table6> Changes of configuration items, individual item of problem behaviour

items	pre		post		T	
	M	SD	M	SD		
Configuration items (n=131)	internalizing	19.7	5.4	17.6	5.1	5.828***
	externalizing	17.0	6.3	14.4	5.8	5.933***
	attention	19.1	5.5	16.0	5.4	6.776***
	sociality	19.4	5.9	16.3	5.6	7.474***
	Total score	75.3	18.5	63.9	18.8	8.574***
Individual items of behaviour problem (n=78)	internalizing	20.4	5.2	18.2	5.4	4.907***
	externalizing	18.5	5.9	15.6	5.9	4.852***
	attention	20.3	5.1	17.3	5.4	5.440***
	sociality	20.7	5.4	17.7	5.6	5.495
	Total score	79.9	17.0	68.2	19.2	6.697***
Individual item of emotional problem (n=53)	internalizing	18.8	5.6	16.5	4.6	3.348*
	externalizing	14.9	6.5	12.6	5.1	3.404*
	Attention	17.2	5.4	14.3	5.0	4.036***
	Sociality	17.5	6.0	14.3	5.1	5.057***
	Total score	68.4	18.7	57.7	16.5	5.310***

* $p<0.05$, *** $p<0.001$

3. Changes of problem behaviour level according to individual treatment

Changes of problem behaviour level of the children, who received PT, between pre and post treatment were assessed. The result of the verification presents significant decrease of internalizing, externalizing, attention and sociality (Table7; $p<0.05$). Changes of problem behaviour level of the children, who received ST, between pre and post treatment were also assessed. The result indicates that there is not any significant difference in internalizing, externalizing, attention and sociality.

<Table7> Changes of level of problem behaviour between pre and post treatment of PT, ST, AT, ST

Items	pre		post		T	
	M	SD	M	SD		
PT (n=55)	internalizing	22.0	3.9	18.6	4.0	6.835***
	externalizing	19.6	5.3	15.1	5.4	6.253***
	Attention	20.9	4.8	16.5	5.0	7.932***
	Sociality	21.3	4.9	17.2	5.1	6.590***
	Total score	83.8	13.7	66.4	17.0	9.490***
ST (n=15)	internalizing	16.3	7.9	17.8	7.0	-1.373
	externalizing	13.9	7.0	13.3	5.9	0.518
	attention	18.4	6.2	16.5	6.4	1.375
	sociality	18.3	6.0	16.5	5.8	1.639
	Total score	66.9	24.5	64.1	21.9	0.848
AT (n=48)	internalizing	19.0	5.4	16.6	5.2	3.844***
	externalizing	15.7	6.3	13.8	6.0	3.127*
	attention	17.5	5.4	15.1	5.4	3.365*
	sociality	17.7	6.2	15.3	6.0	3.966***
	Total score	69.8	17.7	60.7	18.9	4.498***
CT (n=13)	Internalizing	17.3	5.3	16.8	6.4	0.497
	Externalizing	15.1	6.7	14.6	6.6	0.261
	Attention	17.8	5.7	17.6	6.1	0.083
	Sociality	18.9	6.4	16.4	6.1	1.362
	Total score	69.0	19.3	65.4	22.6	0.710

*p<0.05, ***p<0.001

Moreover, changes of problem behaviour level of the children, who received AT, between pre and post treatment were assessed. The verification result presents significant decrease of internalizing, externalizing, attention and sociality (Table7, p<0.05). Changes of problem behaviour level of 13 children, who received CT, between pre and post treatment were also assessed. The result indicates that there is not any significant difference in internalizing, externalizing, attention and sociality (Table7).

IV. Discussion

This study aimed to examine efficacy of treatment service provided by EIS for Children with problem behaviour. The study objected the children who were receiving the service and examined the effect of treatment service in improvement of problem behaviours in the areas of internalizing, externalizing, attention problem and sociality problem. The

differences of effects, according to individual treatment, were also examined.

The results of this study were as below.

Firstly, according to analysis of characteristics of children who were receiving EIS for Children with problem behaviour, in terms of age, the lower grades in elementary school comprised the largest number, and the next largest number was infant and toddler occupying about 27% of participant group. This fact indicates that, difficulties are accoutres in daily life and personal relationship as results of problem behaviour from infant and toddler age. Infant and toddler period is the time when information and support about parenting for parent are necessary as well as support for object young children. Therefore, it is implied that parenting programs are required continuously as well as EIS for children. Once EIS was regarded ADHD treatment program because service was mainly for children with ADHD. However, as the study showed, the proportion of children with emotional problems such as depression and anxiety was as high as ADHD. Therefore, understanding of object children and developing characterised service programs are necessary.

Secondly, the result from comparison and examination of problem behaviour level of children between pre and post treatment presented that the level of problem behaviour was significantly decreased after the treatment. Analysis was carried out dividing problem behaviour types into behaviour problem and emotional problem, and the result displayed significant decrease of both problems after the treatments. In other words, it was shown that participating children's internal problem such as depression/anxiety and external problem such as aggression/impulsiveness were alleviated, attention and concentration were improved, and positive changes in personal relationship was occurred.

Thirdly, looking into changes of problem behaviour level of individual service treatment, PT and AT were effective on problem behaviour of object children. This result is similar to previous articles on same subject (Shin, 2009; Lee, 2000; Satterfield, 1994; Waller, 2006) and it approves the result that PT and AT have positive influence on internalizing, externalizing, attention and sociality areas. Furthermore, PT and AT on behaviour problem children and PT on emotional problem children displayed significant efficacy at the validation about all 4 areas. However, the result of validating the efficacy of AT for children with emotional problem showed no significant change in sociality area. It means that individual AT has limit to improve social ability of children who have emotional problem such as depression, anxiety and attachment problem.

Meanwhile, ST and CT appear to have no significant efficacy on change of problem behaviour level. Previous articles did not include efficacy of ST and CT, it can mean that those therapy might be better to be used as individual and characterized therapies for children instead of being considered as main treatment therapies to improve problem behaviours.

From the results of the study, it was proved that treatment therapies provided by EIS

for Children with problem behaviour make positive effects on changes of children's problem behaviour, and that specifically PT and AT are most effective on improving problem behaviour of children. This result indicates necessity of continuous researches and development of intervention programs related with AT and PT.

Although this study only analysed individual therapy for children, it is much needed to have follow up studies about efficacy of group therapy which is being provided as a treatment service, parenting programs and counselling, and wider research on various other service providing centres besides H centre is necessary.

V. Conclusions

In conclusion, the treatment which EIS centre provided had positive influence on behaviours change of object children, especially PT and AT made greater improvement of children's behaviours. These results show the need of continuous study and development in intervention programs related to PT and AT. It is hoped that the results of this study can be used as basis materials for better understanding of annually growing number of objects of EIS for problem behaviour and development and dissemination of major treatment service programs.

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Reference

- 1) Achenbach TM & Edelbrock CS(1983) Manual for the child behaviour checklist and revised child behavior profiles. University of Vermont.
- 2) Achenbach TM(1991) Manual for the Child Behaviour Checklist / 4-18 and 1991 profile. University of Vermont, Department of Psychiatry.
- 3) Baek HJ & Hwang HJ(2006) Study of effects of parent related variable and self related variable on problem behaviour of elementary school children. *Korean Journal of Psychology: Development*, 19(3), 1-27.
- 4) Chung IA(2004) Conceptual framework for understanding the relationship between poverty and antisocial behaviour profiles. *Focusing on psychosocial mediating mechanisms*, 24 (3), 375-400.
- 5) Han MH(2012) Empirical study about outcome of community social service investment program: Focusing on effect of management intensity for vulnerable family children. *Study of Health and Social Affairs*, 32(1), 177-200.
- 6) Korea Social Service Institute(2010) Manual of Early Intervention Service for children with problem behaviour by Community Social service Investment program.
- 7) Lee JE & Kim CK(2000) A case study of the Social Skills Improvement Group Counseling for Attention Deficit Hyperactivity Disorder Children. *The Journal of Play Therapy*, 4(2), 59-77.
- 8) National Health Insurance Service. <http://www.nhic.or.kr>
- 9) Oh KJ, Ha EH, Lee HR & Hong KE(2001) Five lessons for K-YSR, Seoul: Chung-ang Juk-sung Press.
- 10) Patricia NP, Cynthia AR & Catherine RD(2012) Identifying Emotional and Behavioral Problems in children Aged 4-17 Years, united states, 2001-2007. *National health statistics report*, 24(48), 1-17.
- 11) Posner JK & Vandell DL(1994) Low-income children s after school care : Are there beneficial effects of after school programs?. *Child Development*, 65 (2), 440-456.
- 12) Satterfield JH, Swanson JM, Schell A & Lee F(1994) Prediction of Antisocial behaviour in Attention Deficit Hyperactivity Disorder boys from aggression/ defiance scores. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 185-190.
- 13) Seoul Welfare Foundation(2011) Manual of Seoul Early Intervention Service for children with problem behaviour by Community Social service Investment program.
- 14) Shin JH & Kim GB(2009) The effect of Art Therapy apply to ADHD child's problem behaviour and child relationship. *Korean Association of Human Ecology*, 18(2), 341-351.
- 15) The Korea Ministry of Health & Welfare. <http://www.mw.go.kr>
- 16) Waller D(2006) Art therapy for children; How it leads to change. *Clin Child Psychol Psychiatry*, 11 (2), 271-282.

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