

EFFECTIVENESS OF BEHAVIORAL PARENT THERAPY IN PRESCHOOL CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER

Huei-Lin Huang,¹ Chia-Hua Lu,² Hsiao-Wei Tsai,¹ Chia-Chen Chao,³ Tsai-Yu Ho,²
Sheng-Fa Chuang,¹ Chih-Hao Tsai,¹ and Pin-Chen Yang^{4,5}

Departments of ¹Psychology and ⁴Psychiatry, and ²Graduate Institute of Behavioral Science, Kaohsiung Medical University; ⁵Department of Psychiatry, Kaohsiung Medical University Hospital, Kaohsiung; and ³Department of Psychology and Counseling, Taipei Municipal University of Education, Taipei, Taiwan.

The purpose of this study was to assess the effectiveness of a behavioral parent therapy (BPT) program in children with attention-deficit hyperactivity disorder (ADHD) using multidimensional evaluations, the Child Behavior Checklist (CBCL) and the Teacher Report Form (TRF). Between 2001 and 2005, the parents of 21 preschool children with ADHD were divided into six groups and participated in a series of 11 BPT sessions. Before and after BPT, the parents completed the CBCL, and the teachers completed the TRF. The behavioral and emotional problems of the children showed improvement after the BPT sessions, specifically for the following categories: internalizing problems, anxious/depressed syndromes, somatic complaints, externalizing problems, rule-breaking behaviors, aggressive behaviors, social problems, thought problems, and attention problems. In the DSM-oriented scale of the CBCL, affective problems, anxiety problems, somatic problems, ADHD problems, oppositional defiant disorder problems, and conduct disorder problems showed significant improvements. On the DSM scale of the TRF, Inattention syndrome improved significantly after the BPT sessions, while other syndromes showed non-significant changes. We conclude that the BPT program significantly improved the children's behavioral problems at home and inattention problems at school.

Key Words: attention-deficit hyperactivity disorder, behavioral parent therapy, Child Behavior Checklist, preschool children
(*Kaohsiung J Med Sci* 2009;25:357–65)

Attention-deficit hyperactivity disorder (ADHD) is a psychiatric disorder that is clinically characterized by inattention, hyperactivity and impulsivity. Children with ADHD exhibited greater psychological, academic, emotional and social problems [1]. In fact,

20–67% of children with ADHD had the comorbidity oppositional defiant disorder (ODD), 20–56% had conduct disorder (CD), and at least 25% had mood or anxiety disorders [2].

The follow-up studies indicated that the residual symptoms of ADHD increased the adaptive problems of the juveniles and adults [3]. Therefore, early intervention for preschool children with ADHD is warranted. Preschoolers with ADHD have been reported to exhibit disruptive behaviors, both at school and at home. Additionally, their parents report greater parenting stress, and the presence of externalizing and



ELSEVIER

Received: Dec 7, 2007 Accepted: Mar 30, 2009
Address correspondence and reprint requests to:
Professor Huei-Lin Huang, Department of
Psychology, Kaohsiung Medical University, 100
Shin-Chuan 1st Road, Kaohsiung 807, Taiwan.
E-mail: hlhuang@cc.kmu.edu.tw

internalizing problem behaviors of their children. When assessed by their teachers, the children are rated highly on scales for inattention, aggression, delinquency and social problems [1]. Children with ADHD experience difficulties in completing tasks and making friends, and they are more likely to be disruptive. Furthermore, they experience difficulties in paying attention for a long time, making it hard for them to finish projects requiring concentration and persistence [4]. All of these factors contribute to an overall poor school performance, as shown by the majority of children with ADHD [5].

Behavior modification techniques are often recommended to help children with ADHD. The goal is to change the interactions between children with ADHD and their parents or caregivers, because children with ADHD often cause social distress for their caregivers [6]. It is worthwhile to note that behavior modification techniques used with older children may not be effective in children of preschool age [7], because the two groups are at different developmental stages. The parents of preschool children with ADHD experience greater stress associated with their child's social behavior and ADHD symptoms [8]. In particular, the parents of preschool children with early onset hyperactivity report higher rates of inefficient parental coping strategies, less consistent disciplinary enforcements, and less synchronous mother-child interactions [9]. The use of negative reinforcements, such as time outs or reprimands, was higher among mothers of children with ADHD, ODD or CD [10]. For preschool children with ADHD, parenting programs are generally viewed as an essential component of early intervention [11].

In behavioral parent therapy (BPT) programs, the parents can learn that they need to manage their child's behavior and emotional disturbances, and to use positive, consistent and predictable parenting practices [12]. BPT programs seem effective among children who exhibit disruptive behaviors whether or not they have co-occurring attention/hyperactive difficulties [13–15]. For ADHD patients with mild behavioral problems, BPT programs could improve the behavioral problems of ADHD [12].

The goals of the Barkley [12] BPT program are as follows: (1) to improve parental management skills, and thus, their competence and confidence, when dealing with child behavior problems, particularly noncompliant or defiant behaviors; (2) to increase

parental knowledge of the causes of childhood defiance behaviors, and the principles and concepts underlying social learning of such behaviors; (3) to improve the child's compliance with parental directives; and (4) to improve the family's relationships with each other. Maughan et al [16] suggested that most behaviors are learned, and persist in the daily environment; thus, training parents, who can exert great influence on children in terms of managing problematic behaviors, could increase the possibility of behavioral change in children. The purpose of this study was to assess the effectiveness of BPT by multidimensional evaluation using the Child Behavior Checklist (CBCL) and the Teacher Report Form (TRF).

METHODS

Subjects

Between 2001 and 2005, the parents of 27 boys (48–74 months old) with ADHD formed six BPT groups; 11 BPT sessions were held for each group. The mothers of six children dropped out, and their data were excluded (Excluded Group). Of the other 21 children, the mothers of 19 children, and both parents of two children, participated in all sessions. This study analyzed the data from the mothers' responses for all of the 21 children. For one child, the TRF form was not returned; thus, data from 20 TRF forms were analyzed.

All children had previously been diagnosed as ADHD by a child psychiatrist. There were six inclusion criteria: (1) children aged between 3 years and 7 years and attending preschool; (2) children without diagnosis of intellectual retardation; (3) children without diagnosis of autism; (4) the participating parents' education level was higher than high school (i.e. a college); (5) a biological parent must participate; and (6) the children were living with their parents.

In addition, all of the parents gave informed consent for themselves and their children to participate in the program, and agreed that the children's teachers would complete the TRF form.

Parent training in behavioral management

Barkley [12] proposed a nine-step BPT program comprising 10 sessions, which included: why children misbehave, pay attention, increasing compliance, token economics, time out (2 sessions), managing children in public places, improving school behavior from

home, handling future behavior problems, and a booster session. The BPT program used in this study was based on Barkley's program, but with a few modifications: (1) at the first session, an educational step was added to teach parents about attribution bias and the child's behavior; (2) the token system step was expanded to two steps; (3) "Time Out" and "Extending Time Out to Other Misbehavior" were combined into one step, to treat the misbehavior of preschoolers less severely; and (4) to increase the opportunities of practices before the semester end, the step "Improving School Behavior from Home" was followed by the step "Managing Children in Public Places".

Instruments

A semi-structured interview devised by Barkley and Murphy [17] was used to interview the parents and collect data regarding their parenting practices, their child's developmental and medical histories, behavior problems and DSM-IV (*Diagnostic and Statistical Manual of Mental Disorders*, 4th Edition) diagnoses. In addition, the Wechsler Preschool and Primary Scale of Intelligence-Revised was administered to children.

The CBCL and TRF were used to assess the impact of BPT on the children's behavior. The CBCL, which consists of 120 items asking about the children's behavior at home, was completed by parents at the first session, and at the end of the BPT program. This checklist uses a three-point Likert-type rating scale and has good reliability and validity [18]. The Chinese version of the CBCL has also shown evidence for promising reliability and the validity of the CBCL in Taiwanese culture [19]. Rescorla et al [20] compared parents' ratings on the CBCL for children aged 6–16 years, from 31 societies (including Taiwan), and the results supported the multicultural robustness of the CBCL across 31 diverse societies in terms of internal consistency, mean scale scores across societies, sex and age effects, and mean item scores.

The TRF, a 120-item form asked about problem behaviors in school. The form also contained a three-point Likert scale, and was proved to have good reliability and validity [21].

Using factor analysis, Achenbach and Rescorla [22] found that the CBCL and TRF had eight narrowband syndromes, and two broadband syndromes. Furthermore, according to the expert's judgments, the DSM-oriented scales were developed from the CBCL and

TRF. Attention problems identified by the TRF included inattention sub-syndrome and hyperactivity-impulsivity sub-syndrome. Ivanova et al [23] tested the eight-syndrome structure of CBCL in 30 societies (including Taiwan). Their fit indices strongly supported the correlated eight-syndrome structure in each of the 30 societies. These results support the use of the syndromes in diverse societies.

Assessment procedures

Before the first therapy session, all children were assessed with the Wechsler Preschool and Primary Scale of Intelligence-Revised, and parents took part in Barkley and Murphy's semi-structured interview.

Data analysis

Data were analyzed using SPSS version 11.5 (SPSS Inc., Chicago, IL, USA) for Windows. Statistical procedures included the χ^2 test, the Mann-Whitney test and Student's paired *t* test.

RESULTS

Demographic data

For the included group, the age of children ranged from 49 months to 74 months (mean = 64.96 months). The full-scale intelligence quotient (IQ) of children ranged from 82 to 126 (mean, 106.39), the performance IQ (PIQ) ranged from 85 to 129 (mean, 106.74), and the verbal IQ ranged from 72 to 134 (mean, 105.43). There was a significant difference between the included group and the excluded group in performance IQ ($Z = -2.24, p < 0.01$), in favor of the included group. Although the full-scale and verbal IQs of the included group were higher and the age of the included group was older than those of the excluded group, there were no significant differences between the included group and excluded group (Table 1). All of the subjects were male, the percentage of combined subtype was the highest (56.52%), and there were no significant differences between the included group and excluded group in sex and subtype. The percentage of children with the comorbidity ODD in the included group was 73.91% and was not significant different between the included group and excluded group (Table 1).

In the included group, the age of the mothers ranged from 29 to 50 years old (mean, 35.26 years),

Table 1. Comparison of the children's demographic data and intelligence quotient of included and excluded groups

	Included group (n=23) f(%)	Excluded group (n=7) f(%)	z*	χ^2
Male sex	23 (100.0)	7 (100.0)		–
ADHD subtype				0.23 [†]
Inattention	2 (8.70)	1 (14.29)		
Impulsivity-hyperactivity	8 (34.78)	2 (28.57)		
Combined	13 (56.52)	4 (57.14)		
Comorbidity				2.33 [†]
With ODD	17 (73.91)	4 (57.14)		
Without ODD	6 (26.09)	3 (42.86)		
Age (mo)			–0.86	
Mean (SD)	64.96 (6.63)	61.00 (10.76)		
Range	49.0–74.0	48.0–72.0		
WPPSI-R				
FIQ			–1.82	
Mean (SD)	106.39 (12.10)	96.29 (11.38)		
Range	82.0–126.0	82.0–112.0		
PIQ			–2.24 [‡]	
Mean (SD)	106.74 (11.28)	93.71 (11.76)		
Range	85.0–129.0	78.0–116.0		
VIQ			–1.03	
Mean (SD)	105.43 (14.68)	98.71 (11.18)		
Range	72.0–134.0	81.0–109.0		

*Mann-Whitney U test; [†]Fisher's exact probability test; [‡]p < 0.05. ADHD = attention-deficit hyperactivity disorder; ODD = oppositional defiant disorder; SD = standard deviation; WPPSI-R = Wechsler Preschool and Primary Scale of Intelligence-Revised; FIQ = full IQ; PIQ = performance IQ; VIQ = verbal IQ.

39.1% were educated to high school level and 60.9% were educated to college or higher levels, and 69.6% had a full-time job and 30.4% were housewives. There was no significant difference between the included group and excluded group in terms of age, education or occupation of the mothers (Table 2).

CBCL and TRF syndromes

All post-therapy rating scores were lower or equivalent to the pre-therapy rating scores (Table 3), indicating an overall improvement in the children's behavior. However, the extent of the differences between pre-therapy and post-therapy CBCL and TRF scores was different. For the CBCL, there were significant differences between pre-therapy and post-therapy scores for all syndromes and total problems. However, there were no significant differences between the pre-therapy and post-therapy for the TRF.

The DSM-oriented scales of CBCL and TRF

All post-therapy CBCL and TRF rating scores for the DSM-oriented scale were lower or nearly equivalent

to the pre-therapy rating scores (Table 4). All of the DSM-oriented scales of the CBCL showed significant differences between the pre-therapy and post-therapy results. On the TRF, only the Inattention syndrome showed a statistically significant difference between the pre-therapy and post-therapy DSM-oriented scales; all of the other syndromes showed no significant differences between pre-therapy and post-therapy.

DISCUSSION

The findings of this study show that the BPT program is effective for several indexes, namely inattention and hyperactive-impulsive symptoms, social problems, aggression and rule-breaking behavior in the CBCL reported by parents. Moreover, the program decreases other problems such as anxious/depressed, withdrawn/depressed, internalizing syndrome, affective problems, somatic problems and anxiety problems. These results confirm that, BPT

Table 2. Characteristics of the parents of the included and excluded groups

	Included group (n=23) f(%)	Excluded group (n=7) f(%)	z*	χ^2
Education				2.25 [†]
High school	9 (39.1)	5 (71.4)		
College or higher	14 (60.9)	2 (28.6)		
Occupation				3.76 [†]
Full time job	16 (69.6)	2 (28.6)		
Housewife	7 (30.4)	5 (71.4)		
Age (yr)			-0.074	
Average (SD)	35.26 (4.82)	37.00 (9.27)		
Range	29–50	26–50		

*Mann-Whitney U test; [†]Fisher's exact probability test. SD = standard deviation.

Table 3. Pre-therapy and post-therapy scores for the syndromes of the Child Behavior Checklist and the Teacher Report Form

Syndrome	CBCL (n=23)			TRF (n=22)		
	Pre-therapy Mean (SD)	Post-therapy Mean (SD)	Z	Pre-therapy Mean (SD)	Post-therapy Mean (SD)	Z
Internalizing	9.57 (5.14)	5.70 (4.78)	-3.53*	6.86 (5.93)	5.50 (4.69)	-1.33
Anxious/depressed	4.96 (3.24)	3.13 (2.72)	-2.49*	4.50 (3.75)	3.50 (3.12)	-1.62
Withdrawn/depressed	2.57 (2.04)	1.39 (1.71)	-2.97*	1.36 (1.75)	1.36 (1.46)	-0.09
Somatic complaints	2.04 (1.55)	1.17 (1.20)	-2.11*	1.00 (1.45)	0.64 (1.19)	-1.30
Externalizing syndromes	16.96 (6.13)	12.35 (7.73)	-3.12*	13.82 (8.81)	14.05 (10.84)	-0.19
Rule-breaking behavior	4.52 (2.43)	3.09 (2.38)	-2.76*	3.68 (2.18)	4.05 (3.66)	-0.17
Aggressive behavior	12.43 (4.36)	9.26 (6.01)	-2.89*	10.14 (7.09)	10.00 (8.30)	-0.68
Social problems	6.30 (2.40)	4.57 (3.20)	-2.44*	4.41 (3.66)	4.09 (3.42)	-0.38
Thought problems	3.43 (1.79)	2.48 (1.89)	-2.04*	1.59 (1.97)	0.95 (1.07)	-1.62
Attention problems	9.39 (2.20)	6.87 (3.43)	-2.98*	17.68 (7.52)	15.14 (7.82)	-1.61
Inattention syndrome	-	-	-	8.64 (4.77)	7.05 (4.38)	-1.96*
Hyperactivity-impulsivity syndrome	-	-	-	9.05 (4.13)	8.09 (4.60)	-1.18
Total problems	52.09 (15.26)	36.96 (19.04)	-3.39*	45.18 (22.30)	40.50 (24.00)	-1.06

* $p < 0.05$. CBCL = Child Behavior Checklist; TRF = Teacher Report Form; SD = standard deviation.

can be highly effective in helping parents manage the behaviors of children with hyperactivity/aggression and poor social skills [16,24–29]. Furthermore, the attention problems decreased according to the TRF reported by teachers, a finding similar to that reported by Strayhorn and Weidman [30].

Using questionnaires given to parents before and after therapy, Weinberg [31] found that the BPT program increased parental knowledge of ADHD, and modestly decreased their stress associated with managing their child's behavior. The BPT program helps parents to deal with the symptoms of children with

ADHD children in terms of improving their parenting abilities and interactive relationships [30]. The pre-therapy and post-therapy assessment by teachers did not show significant improvement in terms of ADHD symptoms, except for the inattention problems. This finding suggested that the significant others (e.g. parents and teachers) should be included in the therapy, and highlighted the importance of positive interaction. Changes in the parents and teachers may ultimately be more important, and may have a more profound effect on the children with ADHD than directly changing the children [32]. Improvements in parenting skills

Table 4. Pre-therapy and post-therapy scores for the DSM-oriented scale of the Child Behavior Checklist and the Teacher Report Form

DSM-oriented scale	CBCL (<i>n</i> = 23)			TRF (<i>n</i> = 22)		
	Pre-therapy Mean (SD)	Post-therapy Mean (SD)	Z	Pre-therapy Mean (SD)	Post-therapy Mean (SD)	Z
Affective problems	4.35 (1.83)	3.22 (1.89)	-2.64*	1.05 (1.02)	0.68 (0.97)	-1.47
Anxiety problems	3.09 (2)	1.87 (1.60)	-3.18*	1.64 (1.55)	1.27 (1.57)	-1.15
Somatic problems	1 (1.29)	0.43 (0.82)	-2.03*	0.86 (1.14)	0.45 (0.94)	-1.4
Attention deficit/hyperactivity problems	9.48 (2.43)	7 (3.46)	-3.00*	11.91 (4.32)	10.55 (5.11)	-1.36
Inattention syndrome	-	-	-	5.14 (2.22)	4.27 (2.18)	-1.88
Hyperactivity-impulsivity syndrome	-	-	-	6.77 (2.63)	6.27 (3.37)	-0.59
Oppositional defiant problems	5.26 (2.51)	3.74 (2.4)	-2.93*	3.14 (2.47)	2.91 (2.73)	-0.8
Conduct problems	5.52 (2.62)	3.96 (3.1)	-2.29*	5.64 (3.82)	5.77 (5.01)	-0.47

**p* < 0.05. DSM = *Diagnostic and Statistical Manual of Mental Disorders*; CBCL = Child Behavior Checklist; TRF = Teacher Report Form; SD = standard deviation.

could enhance the positive parent-child interaction, which helps the family to cope with these symptoms. Similarly, improving the teachers' strategies of managing ADHD behavior and strengthening the generalizability and training of skills could better show the effectiveness of the therapy.

However, the maintenance effect of this study is unclear. Prior reports have presented conflicting findings on whether the effects of behavioral treatments are maintained over time, after withdrawing the active treatment regimen [33]. The Multimodal Treatment Study of ADHD was designed to study the effectiveness of intensive medication management, intensive behavioral treatment, combination and usual treatment. At the end of the treatment phase, two groups (combination and intensive medication management) showed deteriorations in the follow-up phase whereas the other two groups (intensive behavioral treatment and usual treatment) did not. In addition, 56% of the children treated with behavior modification in that study were maintained without medication for 14 months of treatment [34].

BPT courses have been considered to be an effective intervention in many studies [24,27-29]. In this study, the demonstrable effects of a modified BPT program for parents of children with ADHD occurred within 3 months, confirming the effects of BPT. In terms of evaluation tools, Biederman et al [18] studied 105 boys with ADHD aged 6-17 years using assessments at

baseline and at a 4-year follow-up, and found substantial stability in CBCL syndromes over time.

In summary, the BPT program improved the behavior and emotional problems in the parental CBCL ratings, including internalizing problems, anxious/depressed, somatic complaints, externalizing problems, rule-breaking behavior, aggressive behavior, social problems, thought problems and attention problems. In the DSM-oriented scales of the CBCL, all of the problems were significantly alleviated. Furthermore, Inattention syndrome showed significant improvements and, for all of the other problems, the post-therapy results were lower or nearly equivalent to the pre-therapy results in the TRF and DSM-oriented scales of the TRF. The positive findings observed in this particular study may be valuable for future therapy programs.

ACKNOWLEDGMENTS

This study was supported by grants (NSC-94-2413-H-037-011, NSC-95-2413-H-037-001) from the National Science Council, Taiwan. Special thanks to Chuan-Ching Tu, Hsiu-Jung Wu, Chia-Jung Li, Fang-Chin Hsu, Tsai-Yu Ho, Ying-Ru Chen, Chien-Chung Hsu, Chia-Hua Lu, Chia-Yin Tsai, Ting-Li Wang, Hsiang-Yin Lo, Wan-Ru Lau and Ying-Yuan Lu for their assistance in data collection. Our deepest gratitude to the

teachers and parents at the participating kindergartens for their help and support in this study.

REFERENCES

- Barkley RA, Shelton TL, Crosswait C, et al. Preschool children with disruptive behavior: three-year outcome as a function of adaptive disability. *Dev Psychopathol* 2002;14:45–67.
- Barkley RA. *Attention Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, 2nd edition. New York: Guilford, 1998.
- Tsai CH, Gau SF. Long-term outcome studies of hyperactive children: literature review. *Kaohsiung J Med Sci* 1999;15:307–14.
- Mash EJ, Wolfe DA. *Attention-deficit Hyperactivity Disorder. Abnormal Child Psychology*, 2nd edition. California: Wadsworth, 2002.
- Mash EJ, Barkley RA. *Attention-deficit Hyperactivity Disorder. Treatment of Childhood Disorder*. New York: London, 1998.
- Barkley RA. Psychosocial treatments for attention-deficit/hyperactivity disorder in children. *J Clin Psychiatry* 2002;63:36–43.
- McGoey KE, Eckert TL, DuPaul GJ. Early intervention for preschool-age children with ADHD: a literature review. *Arch Clin Neuropsychol* 2002;10:14–28.
- DuPaul GJ, McGoey KE, Eckert TL, et al. Preschool children with attention-deficit/hyperactivity disorder: impairments in behavior, social, and school functioning. *J Am Acad Child Adolesc Psychiatry* 2001;40:508–15.
- Keown LJ, Woodward LJ. Early parent-child relations and family functioning of preschool boys with pervasive hyperactivity. *J Abnorm Child Psychol* 2002;30:541–53.
- Cunningham CE, Boyle MH. Preschoolers at risk for attention-deficit hyperactivity disorder and oppositional defiant disorder: family, parenting, and behavioral correlates. *J Abnorm Child Psychol* 2002;30:555–69.
- Jones K, Daley D, Hutchings J, et al. Efficacy of the Incredible Years Basic parent training programme as an early intervention for children with conduct problems and ADHD. *Child Care Health Dev* 2007;33:749–56.
- Barkley RA. *Defiant Children: A Clinician's Manual for Assessment and Parent Training*, 2nd edition. New York: Guilford Press, 1997.
- Hartman RR, Stage SA, Webster-Stratton C. A growth curve analysis of parent training outcomes: examining the influence of child risk factors (inattention, impulsivity, and hyperactivity problems), parental and family risk factors. *J Child Psychol Psychiatry* 2003;44:388–98.
- Bor W, Sanders MR, Markie-Dadds C. The effects of the Triple P-Positive Parenting Program on preschool children with co-occurring disruptive behavior and attentional/hyperactive difficulties. *J Abnorm Child Psychol* 2002;30:571–87.
- Antshel KM, Barkley RA. Psychosocial interventions in attention deficit hyperactivity disorder. *Child Adolesc Psychiatr Clin N Am* 2008;17:421–37.
- Maughan DR, Christiansen E, Jenson WR, et al. Behavioral parent training as a treatment for externalizing behaviors and disruptive behavior disorder: a meta-analysis. *School Psych Rev* 2005;34:267–85.
- Barkley RA, Murphy KR. *Attention-deficit Hyperactivity Disorder: A Clinical Workbook*, 2nd edition. New York: Guilford Press, 1998/2001.
- Biederman J, Monuteaux MC, Greene RW, et al. Long-term stability of the child behavior checklist in a clinical sample of youth with attention deficit hyperactivity disorder. *J Clin Child Psychol* 2001;30:492–502.
- Huang HL, Chuang SF, Wang YC, et al. Developing the multiaxial behavioral assessment of children in Taiwan. In: Chinese Assessment Association, ed. *Psychological Assessment in Chinese-Speaking Society*. Taipei: Psychological Press, 1994:259–310. [In Chinese]
- Rescorla LA, Achenbach TM, Ivanova MY, et al. Behavioral and emotional problems reported by parents of children aged 6 to 16 in 31 societies. *J Emot Behav Disord* 2007;15:130–42.
- Dumenci L, McConaughy SH, Achenbach TM. A hierarchical three-factor model of inattention-hyperactivity-impulsivity derived from the attention problems syndrome of the teacher's report form. *School Psych Rev* 2004;33:287–301.
- Achenbach TM, Rescorla LA. *Manual for the ASEBA School-Age Forms and Profiles*. Burlington: University of Vermont, Research Center for Children, Youth & Families, 2001.
- Ivanova MY, Dobrean A, Dopfner M, et al. Testing the 8-syndrome structure of the Child Behavior Checklist in 30 societies. *J Clin Child Adolesc Psychol* 2007;36:405–17.
- Pisterman S, McGrath P, Firestone P, et al. Outcome of parent-mediated treatment of preschoolers with attention deficit disorder with hyperactivity. *J Consult Clin Psychol* 1989;57:628–35.
- Sonuga-Barke EJS, Daley D, Thompson M. Does maternal ADHD reduce the effectiveness of parent training for preschool children's ADHD? *J Am Acad Child Adolesc Psychiatry* 2002;41:696–702.
- Shelton TL, Barkley RA, Crosswait C, et al. Multimethod psychoeducational intervention for preschool children with disruptive behavior: two-year post-treatment follow-up. *J Abnorm Child Psychol* 2000;28:253–66.
- Erhardt D, Baker BL. The effects of behavioral parent training on families with young hyperactive children. *Exp Clin Psychopharmacol* 1990;60:163–73.
- Huang HL, Chao CC, Tu CC, et al. Behavioral parent training for Taiwanese parents of children with attention-deficit/hyperactivity disorder. *Psychiatry Clin Neurosci* 2003;57:275–81.

29. van den Hoofdakker BJ, van der Veen-mulders L, Sytema S, et al. Effectiveness of Behavioral Parent Training for children with ADHD in routine clinical practice: a randomized controlled study. *J Anxiety Disord* 2007;46:1263–71.
30. Strayhorn JM, Weidman CS. Follow-up one year after parent-child interaction training: effects on behavior of preschool children. *J Am Acad Child Adolesc Psychiatry* 1991;30:138–43.
31. Weinberg HA. Parent training for attention-deficit/hyperactivity disorder: parental and child outcome. *J Clin Child Psychol* 1999;55:907–13.
32. Bloomquist ML, August GJ, Ostrander R. Effects of a school-based cognitive-behavioral intervention for ADHD children. *J Abnorm Child Psychol* 1991;19: 591–605.
33. Pelham WE, Fabiano GA. Evidence-based psychosocial treatments for attention-deficit/hyperactivity disorder. *J Clin Child Adolesc Psychol* 2008;37:184–214.
34. MTA Cooperative Group. National Institute of Mental Health Multimodal Treatment Study of ADHD follow-up: 24-month outcomes of treatment strategies for attention-deficit/hyperactivity disorder. *Pediatrics* 2004; 113:754–61.

注意力缺陷過動症學齡前兒童之父母行為治療效果

黃惠玲¹ 呂嘉華² 蔡曉薇¹ 趙家琛³ 何采諭²

莊勝發¹ 蔡志浩¹ 楊品珍^{4,5}

高雄醫學大學¹ 心理系² 行為科學研究所⁴ 醫學系精神科學

³ 台北市立教育大學 心理與諮商學系

⁵ 高雄醫學大學附設醫院 精神科

本研究目的為探討注意力缺陷過動症兒童 (ADHD) 之父母行為治療效果 (behavioral parent therapy, 簡稱 BPT), 以兒童行為檢核表 (Child Behavior Checklist, 簡稱 CBCL) 與老師報告格式 (Teacher Report Form, 簡稱 TRF) 等多向度評估。研究自 2001 年至 2005 年期間, 共六個梯次團體 21 位家中有學齡前注意力缺陷過動症兒童的父母, 參與十一次父母訓練課程, 治療前後父母填寫 CBCL、老師填寫 TRF。研究結果發現, 兒童的行為與情緒在 BPT 後均有改善, 特別是在: 父母所填寫 CBCL 的內化問題、焦慮 / 憂鬱症狀、身體抱怨、外化問題、違反規範行為、攻擊行為、社交問題、思考問題以及注意力問題; 在 CBCL 的 DSM 導向量尺上, 也顯現情感性問題、焦慮問題、身體問題、注意力缺陷過動問題、對立性反抗問題以及品行問題等治療前後有顯著改善; 老師所評量 TRF 的 DSM 導向量尺上, 注意力不足症候群在治療後皆顯著降低, 其他症候群則無顯著性的改善。本篇研究結果顯示, BPT 顯著地改善兒童在家中的行為問題, 以及在學校中的注意力不足問題。

關鍵詞: 注意力缺陷過動症, 父母行為治療, 兒童行為檢核表, 學齡前兒童
(高雄醫誌 2009;25:357-65)

收文日期: 96 年 12 月 7 日

接受刊載: 98 年 3 月 30 日

通訊作者: 黃惠玲教授

高雄醫學大學心理學系

高雄市 807 三民區十全一路 100 號