

# Effectiveness of a New Social / Cognitive Therapeutic Model for Aggressive Children

## اثر بخشی یک الگوی جدید درمانگری شناختی - اجتماعی بر کودکان پرخاشگر

Ali Sahebi, PhD      Efat S. Mirabdollahi  
Ferdowsi University &      Sydney University  
Sydney University

دکتر علی صاحبی      عفت السادات میر عبدالمی  
دانشگاه فردوسی و      دانشگاه سیدنی  
دانشگاه سیدنی

### Abstract

The present study evaluated the effectiveness of a new therapeutic model for aggressive children in Iran. The intervention was based on a social/cognitive model. 119 boys and 38 girls, ages 8-15 ( $M=10.77$ ,  $S.D. = 1.33$ ) participated in the study. Children were referred by the teachers of the selected schools, based on having one of the six aggressiveness criteria, and diagnosed with a symptom checklist based on the DSM-IV diagnostic criteria. 31 children were diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), 19 with Oppositional Defiant Disorder/Conduct Disorder (ODD/CD), 47 with ADHD/ODD, 22 with ADHD/CD, and 38 with other types of diagnoses not mentioned above. All children were administered the Children Depression Inventory (CDI), the Piers Harris Self-Concept Scale (PHSCS), and The Youth Self-Report (YSR) as a pre and post-test measure of their conduct. The Bauermeister School Behaviour Inventory (BSBI) was completed by teachers as an additional measure. Children then were divided in five groups: 1- somatic complaints, 2- Anxiety depression, 3- social problems, 4- Attention problems, and 5- Aggressive conduct, and they all received eight sessions of social/cognitive therapy. The results suggest that the social/cognitive treatment was effective with all groups of children, regardless of diagnostic classification, in reducing somatic complaints, anxiety/ depression, social problems, attention problems, and aggressive conduct.

**Key words:** social cognitive therapy, aggressive conduct, somatic complains, anxiety, depression, attention.

### چکیده

این پژوهش با هدف تعیین اثربخشی یک الگوی درمانگری جدید بر کودکان پرخاشگر ایرانی انجام شد. مداخله درمانگری بر یک الگوی شناختی - اجتماعی استوار بود. 157 کودک (19 پسر و 38 دختر) 8 تا 15 ساله ( $M = 10/77$ ,  $S.D. = 1/33$ ) در این تحقیق شرکت کردند. کودکان براساس دارا بودن یکی از شش نشانه پرخاشگری که در اختیار معلمان مدارس منتخب قرار گرفت، ارجاع شدند. سپس براساس فهرست نشانه‌های مبتنی بر ضوابط تشخیصی DSM-IV تعیین وضعیت آنها مبادرت شد. 31 کودک دارای اختلال نارسایی توجه/فزون کنشی (ADHD)، 19 نفر واجد اختلال تضاد ورزی گستاخانه / اختلال رفتار هنجاری (ODD/CD)، 47 نفر با ADHD/ODD، 22 نفر ADHD/CD و 38 نفر دارای اختلالهایی بودند که در مقوله‌های تشخیصی بالا قرار نمی‌گرفت. سپس پرسشنامه افسردگی کودکان (CDI)، مقیاس خود پنداشت پیرز - هریس (PHCS)، مقیاس خود گزارش‌دهی جوانان (YSR) به عنوان ابزارهای سنجش پیش آزمون - پس‌آزمون به کار رفت. به آزمون رفتار مدرسه‌ای بور مایستر (BSBI) نیز به منزله یک مقیاس تشخیصی مکمل توسط معلمان پاسخ داده شد. بر مبنای اطلاعات به دست آمده دانش‌آموزان به پنج گروه (شکایتهای جسمانی، اضطراب/افسردگی، مشکلات اجتماعی، مشکلات توجه و رفتار پرخاشگرانه) تقسیم شدند و هر گروه، هشت جلسه درمانگری اجتماعی/شناختی را دریافت کردند. یافته‌ها اثربخشی درمان اجتماعی/شناختی را، صرف نظر از نوع طبقه بندی تشخیصی نشان دادند و کاهش معنادار شکایتهای بدنی، اضطراب/افسردگی، مشکلات اجتماعی، مشکلات توجه و رفتار پرخاشگرانه را برجسته کردند.

**واژه های کلیدی:** درمانگری شناختی - اجتماعی، رفتار پرخاشگرانه، شکایتهای جسمانی، اضطراب، افسردگی، توجه.

Correspondence concerning this article should be addressed to Ali Sahebi, School of Psychology, Ferdowsi University, Mashhad-Iran; or Department of Family Therapy, Sydney University, Sydney-Australia. E-mail: [asahebi@gmail.com](mailto:asahebi@gmail.com)

## Introduction

Aggression can be defined as deliberate actions directed towards other people or objects, with some intention to destroy or injure the target (Lochman and Lenhart, 1993). On the other hand, impulsiveness refers to specific behaviours such as interrupting others, not waiting turns, answering before a question is finished and acting quickly and without evaluating consequences (APA, 1994). Studies suggest that overlaps exist amongst these terms and that it is not uncommon for children to display both types of behaviours. In fact, the term known as externalising behaviours is used to describe a set of negativist behaviours which-occur during childhood. These behaviours are referred to collectively as: Attention Deficit and Disruptive Behaviour Disorders (APA, 1994). The three subgroups of externalising behaviours include Oppositional Defiant Disorder (ODD), Attention Deficit Hyperactivity Disorder (ADHD), and Conduct Disorder (CD), (Duff, 2002).

Salary and Shamlu (2001) revealed in an epidemiological study done in Iran a 5/25% prevalence of defiant conduct in the child population. These behaviours included temper tantrums, arguing with adults, defiance or refusing to comply with adults' requests or rules, annoying people, being sensitive, angry, resentful, spiteful or vindictive, and blaming others for mistakes or misbehaviours (APA, 1994). For the Attention Deficit Hyperactivity Disorder, which presents symptoms of impulsiveness and hyperactivity, the prevalence in Iranian children population was 5/57%.

Bird, Gould, and Staghezza-Jaramillo (1994)

conducted an analysis of the data from the Puerto Rico child Psychiatric Epidemiology Study (Bird et al, 1988) and found a high level of co-morbidity between ADHD and the CD/ODD group. These authors found that children with a co-morbid diagnosis of ADHD and CD/ODD display a higher level of conduct/oppositional symptomatology than children with ADHD.

Shelton, et al. (1998) indicate that hyperactive/inattentive children are at higher risk of developing socially aggressive behaviour, oppositional defiant disorder and conduct disorder. These authors indicate that children with ADHD, with a pattern of high level of aggressiveness, are at high risk of developing psychological, academic, emotional, and social difficulties than children with ADHD, but without a pattern of aggressiveness. Their study found that 60% to 76% of the aggressive-hyperactive-impulsive-inattentive children (n = 154) were also prone to an oppositional defiant disorder.

Bauermeister and colleagues have conducted several studies with ADHD children. Bauermeister, Alegria, Bird, Rubio-Stipec, and Canino (1992) performed a factor analysis on teacher ratings of symptoms in a sample of children 6 to 16 years (n = 614) which yielded two factors: inattention and hyperactive - impulsivity. Subsequent cluster analyses ended at five clusters. These clusters were: 1) Hyperactive (characterised by high hyperactivity-impulsivity and moderately high inattention scores), 2) Inattentive (very high inattention, but very low hyperactivity-impulsivity scores), 3) Inattentive-hyperactive (high scores on both inattention and hyperactivity-impulsivity), 4) Normal (scores of

both factors that approximate the total sample means), and 5) Highly adapted (had scores on both factors that were lower than the total sample). The authors found that the children in the hyperactive, inattentive, and inattentive-hyperactive clusters showed more clinical impairments than children in the normal and highly adapted clusters. Some of these clusters are related to symptoms of aggressiveness. The inattentive-hyperactive children were rated by teachers as significantly more aggressive, self-destructive and showing more behavioural problems than normal and the highly adapted groups.

Bauermeister, Matos, and Barkley (1999) conducted a study with 119 children; ages six to eleven years. The authors found that mothers tended to rate hyperactive-impulsive children and inattentive children as showing more oppositional defiant behaviours, externalising behaviours, and attentional problems than the normal group. In this study, teachers rated inattentive and hyperactive-impulsive children as having more oppositional defiant, aggressive and delinquent behaviours than the normal group. Bauermeister et al (1999) identified three groups of children in their analyses: those with high scores for inattention only, those with high scores of hyperactivity-impulsivity only, and those with a combination of inattention and hyperactivity-impulsivity.

Authors such as Braswell and Bloomquist (1991), Asgharnia, Lotfabadi and Sahebi (2002) suggest that cognitive-behavioural interventions are more appropriate for children with ADHD that show aggression than for non-aggressive children

with ADHD. Asgharnia and colleagues (2002) also found that cognitive behavioural therapy techniques are effective in reducing anger and aggressive behaviours in young children. Lochman and Lenhart (1993) studied the use of a structural program for children in fourth and fifth grade. These authors indicate that cognitive-behavioural interventions with aggressive children have positive effects on self-esteem, conflict resolution, and drug use prevention as a secondary effect. The program included role playing, peer interactions, activities skill training, and situation trials. Nelson and Finch (1996) mentioned that cognitive-behavioural approaches hold notable promise for dealing with aggressive and violent youths.

Cognitive - behavioural interventions have proven to be effective for children with the aforementioned behaviours (Kazdin, Bass, Siegal and Thomas, 1989; Kendall, 1993; Kendall and Dobson, 1993; Nelson and Finch, 1996), yet a specific cognitive model that integrates the social/ interpersonal factors proposed by Lochmann and Lenhart (1993) has not been proposed. The cognitive-behavioural approach is an integrationist intervention that uses enactive and performance based procedures as well as cognitive intervention. The goal of the integration of both approaches is to produce changes in thinking, feelings, and behaviour. Kendall (1993) indicates that the intervention integrates cognitive, behavioural, and social strategies and places its greatest emphasis on the learning process.

A cognitive-behavioural intervention includes techniques such as modelling, rewards, affective

education, enactive procedures, and training tasks. Some techniques and exercises involve parents, teachers and peer participation. Exercises include role-playing, in vivo exposure, in-session tasks, homework, practices, and self-evaluation among others.

## Method

**Subjects:** One hundred fifty seven children (119 boys and 38 girls), ages 8-15 ( $M=10.77$ ,  $S.D. =1.33$ ) participated in the study. Thirty one (31) children (20 boys, 11 girls) were diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), 19 (14 boys, 5 girls) with Oppositional Defiant Disorder/Conduct Disorder (ODD/CD), 47 (39 boys, 8 girls) with ADHD-ODD, 22 (17 boys, 5 girls) with ADHD-CD, and 38 (29 boys, 9 girls) with other types of diagnoses not included above. Children were diagnosed with a symptoms checklist based on the DSM-IV diagnostic criteria. Children were referred by the teachers of the selected schools for any of the following behaviours: 1) often bullies, threatens, or intimidates others; 2) often initiates physical fights; 3) has been physically cruel to people; 4) has been physically cruel to animals; 5) has destroyed other's property (in a tantrum and not as part of delinquent behaviour); 6) often interrupts or intrudes on others.

**Measures:** Children Depression Inventory (CDI). The CDI is a self-report scale consisting of 27 items related to depression. The scale was adapted for children and youths by Kovacs (1985). Scores of 0-11 are considered either as absence of or low depression. Scores of 12-18 are considered

mild depression, and scores of 19 or more are considered severe depression. The scale was translated and adapted for the Iranian culture by authors. The scale has shown an internal consistency of .82 and reliability of .79.

Piers Harris Self-Concept Scale (PHSCS). The PHSCS is an 80-item instrument designed to evaluate what children and adolescents feel about themselves. The test evaluates attitudes as well as behaviours related to self-concept. Self-concept is defined as a series of attitudes about oneself that reflect themselves in behaviours and attributes (Piers, 1984). This scale can be administered individually or ingroups and its administration take between 15-20 minutes. Research indicates that this instrument may be administered to children and adolescents 8 to 18 years of age. The items are grouped in four categories: happiness, satisfaction, behaviour, and academic status. This scale was translated to Farsi and adapted, taking into consideration cultural elements. The scale has an internal consistency of .94 and a reliability of .94.

Youth Self-Report (YSR) (Achenbach, 1991) (Farsi version for children also known as Child Behaviour Checklist-Child). This version contains 113 items that ask about the youth's behaviour as perceived by themselves. The instrument is answered: No=0, sometimes=1 and frequently=2. This measure was translated and adapted for Iranian children by the Ferdowsi University, Clinic of Psychology (Sahebi et. al. 2001).

**Procedure:** After obtaining the required consent forms for participation, the evaluation phase of the study began. Pre-tests were administered to the

children who participated in order to obtain information about their conduct before the intervention phase. The intervention phase included eight group therapy sessions in which the children learned different techniques for managing anger. The techniques were based on the social, cognitive-behavioural model developed by Kendall (1993) and included relaxation techniques, role-playing, and the stop and think technique. Post-tests were administered following the termination of the intervention phase. The data obtained throughout the study was analysed using the Statistical Package for the Social Science computer program (SPSS, Inc., 2000).

## Results

The mean pre and post-intervention scores for all diagnostic groups were compared for each scale administered to the children and their teachers. Repeated measures analyses of variance were performed with each measure with diagnostic groups as the between subjects variable and the time of evaluation (pre and post-treatment) as the within subject variable. The results of these analyses showed significant differences within subjects between the pre and post-treatment in the scales of somatic complaints, anxiety/depression, social problems, attention problems, and aggressive conduct. Table 1 summarises these results. No significant difference was found for the diagnostic group variable or for the interaction between diagnostic group and time of evaluation.

**Table 1: Pre and Post Mean scores for the Children Depression Inventory (CDI), the Pier Harris Self-Concept Scale (PHSCS), and the Youth Self-Report (YSR) subscales**

| <b>Instrument</b>               | <b>Mean of Total Subscale Scores</b> |                       |                 |
|---------------------------------|--------------------------------------|-----------------------|-----------------|
|                                 | <b>Pre-Test</b>                      | <b>Post-Test</b>      | <b>Sig. (P)</b> |
| <b>CDI</b>                      | 14.30<br>(S.D.=6.87)                 | 9.02<br>(S.D.=7.65)   | 0.564           |
| <b>PHSCS</b>                    | 56.42<br>(S.D.=11.11)                | 42.33<br>(S.D.=11.89) | 0.897           |
| <b>Social Withdrawal (YSR)</b>  | 4.30<br>(S.D.=2.31)                  | 2.18<br>(S.D.=2.43)   | 0.068           |
| <b>Somatic Complaints (YSR)</b> | 5.43<br>(S.D.=3.54)                  | 4.16<br>(S.D.=3.29)   | 0.001*          |
| <b>Anxiety/depression (YSR)</b> | 7.82<br>(S.D.= 4.98)                 | 4.63<br>(S.D.=4.77)   | 0.001*          |
| <b>Social Problems (YSR)</b>    | 4.83<br>(S.D.=2.46)                  | 3.09<br>(S.D.=2.44)   | 0.001*          |
| <b>Attention Problems (YSR)</b> | 5.17<br>(S.D.=3.17)                  | 4.31<br>(S.D.=3.11)   | 0.001*          |
| <b>Delinquent Conduct (YSR)</b> | 4.11<br>(S.D.=2.81)                  | 3.05<br>(S.D.=3.04)   | 0.771           |
| <b>Aggression (YSR)</b>         | 10.63<br>(S.D.=6.39)                 | 6.28<br>(S.D.=5.89)   | 0.001*          |
| <b>Other Problems (YSR)</b>     | 10.44<br>(S.D.=4.40)                 | 8.83<br>(S.D.=4.53)   | 0.056           |

P\*=0.003

An ANOVA with repeated measures on baseline (pre-treatment) and post-treatment CDI scores yielded significant time ( $F(1/156)=5.21, p<0.001$ ). However, no significant differences were found for diagnostic group, ( $F(1/156)=2.31, p>0.05$ ) and Group x time showed no superiority for any diagnostic group in all measures. A repeated measures ANOVA was also conducted on pre-treatment and post-treatment on PHSCS scores. A significant effect for time (pre to post) ( $F(156)=8.72, p<0.001$ ) was obtained but there was no significant effect for Group or Group x time interactions.

All diagnostic groups (somatic complaints, anxiety/depression, social problems, attention problems and aggressive conduct) endorsed less dysfunctional behaviour and negative mood, but there were no significant differences among them.

## Discussion

The results suggest that social-cognitive treatment was effective with all groups of children, regardless of diagnostic classification, in reducing somatic complaints, anxiety/depression, social problems, attention problems, and aggressive conduct. These findings support the literature that states that cognitive behavioural models are effective in the treatment of aggression related behaviours (Braswell and Bloomquist 1991; Kazdin, Bass, Siegel, and Thomas 1989; Kendall, 1993; Kendall and Dobson, 1993; Nelson and Finch, 1996).

Since we did not include the families of the children in the therapeutic process, we recommend that, for future studies, the parents of the children

be included in the process. Studies suggest that family participation in this process is beneficial and could provide valuable information (Alexander and Parson 1991; Kazdin, 1993). The main constraint of the present study was the limited number of participants. Thus future research needs to validate these results with a larger sample. Also a more precise diagnostic classification, following well established interview procedures, is needed to assess the effect of the therapeutic intervention in different diagnostic groups.

## References

- Achenbach, T. (1991).** *Manual for the Child Behaviour Checklist/4-18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Alexander, J., & Parsons, B. (1992).** Functional family therapy. In A. Roth & Fonagy, P. (Eds), *What works for whom?: A critical review of psychotherapy research*. New York: Guilford Press.
- American Psychiatric Association (1994).** *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition Washington, DC.
- Asgania, R., Lotfabadi, H., & Sahebi A. (2002).** Cognitive Behaviour play therapy for aggressive children. Unpublished Thesis. School of Education, Ferdowsi University Mashhad-Iran.
- Bauermeister, J. (1994).** *Desarrollo y utilización del Inventario de Comportamiento Escuela (IDC-E) en la evaluación de niños puertorriqueños*. San Juan, Puerto Rico: Author.
- Bauermeister, J., Alegria, M., Bird, H., Rubio-Stipec, M., & Canino, G. (1992).** Are Attentional-Hyperactivity Deficits unidimensional or multi dimensional syndromes? Empirical findings from a community survey. *Journal of the American Academic of Children and Adolescents Psychiatry*, 31 (31), 423-431.

- Bauermeister, J., Matos, M., & Barkley, R. (1999).** Attention Deficit Disorder with and without Hyperactivity in Hispanic children. Paper presented at the American Psychological Association Convention, August 20-24, Boston, MA.
- Bernal, G., Rosselli, J., & Martinez, A. (1997).** El Inventario de Depression para niños y niñas: Propiedades psicométricas en dos muestras puertorriqueñas. *Revista Psicológica Contemporánea*, 4, 12-23.
- Bird, H., Canino, G., Rubio-Stipex, M., Gould, M., River, J., Sesman, M., Woodbury, M., Huertas-Goldman, S., Pagan, A., Sanchez-Lacay, A., & Moscoso, M. (1988).** Estimates of the prevalence of childhood maladjustment in a community survey in Puerto Rico. *Archives of general Psychiatry*, 45, 1120-1126.
- Bird, H., Gould, M., & Staghenza-Jaramillo, B. (1994).** The comorbidity of ADHD in a community sample of children ages 6 through 16 years. *Journal of Child and Family Studies*, 3, 365-378.
- Braswell, L., & Bloomquist, M. (1991).** Cognitive behavioural therapy with ADHD children: Child, family and school intervention. New York: Guilford Press.
- Author. Burlington, VT: University of Vermont, Department of Psychiatry.
- Duff, J. (2002).** The aetiology of Attention Deficit Hyperactivity Disorder: Evidence of a neurobiological basis and treatment implications (on-line). Available: <http://www.adhd.com.au/ADHDAeti.html>
- Kazdin, A. (1993).** Psychotherapy for children and adolescents: Current progress and future research directions. *American Psychologist*, 48, 644-657.
- Kazdin, A., Bass, D., Siegel, T., & Thomas C. (1989).** Cognitive-behavioural therapy and relationship therapy in the treatment of children referred for antisocial behaviour. *Journal of Consulting and Clinical Psychology*, 57, 522-535.
- Kendall, P. (1993).** Cognitive-behavioural therapies with youth: guiding theory, current status, and emerging developments. *Journal of Consulting and Clinical Psychology*, 61, 235-247.
- Kendall, P., & Dobson, K. (1993).** On the nature of cognition and its role in psychopathology. In K.S. Dobson & P.C. Kendall (Eds.), *Psychopathology and Cognition*. San Diego: Academic Press.
- Kovacs, M. (1985).** The Children's Depression Inventory (CDI). *Psychopharmacology Bulletin*, 21, 995-998.
- Lochman, J., & Lenhart, L. (1993).** Anger coping intervention for aggressive children: Conceptual models and outcome effects. *Clinical Psychology Review*, 13, 785-805.
- Nelson, M., & Finch, A.J. (1996).** *Cognitive-behavioural therapy for aggressive children: Therapist manual*. Ard,pre. PA: Workbook Publishing.
- Piers, E. (1972).** Prediction of children's self-concepts. *Journal of Consulting and Clinical Psychology*, 38, 428-433.
- Rosello, J., Guisasola, E., Ralat, S., Martinez, S., & Nieves, A. (1992).** La evaluación de la depresión en un grupo de jóvenes puertorriqueños. *Revista Puertorriqueña de Psicología*, 8, 155-162.
- Salary, R.S., & Shamlu, S. (2001).** Family Functioning of Depressed and normal Adolescence in Iran. Unpublished master thesis. University of Welfare & Rehabilitation sciences, Tehran-Iran.
- Shelton, T., Barkley, R., Crosswait, C., Moorehouse, M., Fletcher, K., Barret, S., Jenkins, L., & Metevia, L. (1998).** Psychiatric and psychological morbidity as a function of adaptive disability in preschool children with aggressive and hyperactive-inattentive behaviour. *Journal of Abnormal Child Psychology*, 26, 475-494.
- SPSS. Inc. (2000).** *SPSS for windows: Base System User's Guide, Release 10.0*. Chicago, IL: Author.