
**A REVIEW OF THE EFFECTIVENESS OF
GROUP COGNITIVELY ENHANCED BEHAVIORAL
BASED PARENT PROGRAMS DESIGNED FOR
REDUCING DISRUPTIVE BEHAVIOR IN CHILDREN**

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Abstract

Few studies have examined the effects of varying the level of intensity of a parenting intervention in the treatment of conduct problems in children. In particular, it is unclear whether group parenting interventions that incorporate adjunctive cognitive interventions designed to reduce parental stress add to the efficacy and durability of effects of standard parenting skills training. Adjunctive interventions designed to reduce depression, stress, anger management problems or cognition biases, delivered in group settings, have the potential to augment parenting skills training. There is some empirical support for adjunctive interventions, but there are also conflicting findings. This study reviews the data from existing randomized controlled trials evaluating the effectiveness of group based cognitively enhanced behavioral parenting programs for reducing children's disruptive behavior and parent distress. The findings show the potential that such interventions have in reducing children's disruptive behavior and draw some lines for future integration of the cognitive components in behavioral parent training.

Keywords: cognitively enhanced, behavioral parent training, disruptive behavior

Introduction

There is evidence from a range of follow-up studies to suggest that a number of factors relating to the mother's psychosocial and mental health can have a significant effect on the mother-infant relationship, resulting in both emotional and behavioral problems in childhood. Longitudinal studies have also shown an effect of maternal mental health problems on the long-term emotional

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and psychological health of the child (Caplan, Cogill, Alexandra, Robson et al, 1989). There is, therefore, considerable potential for interventions aimed at promoting the psychosocial wellbeing of the mother, to reduce the disruption to the child's emotional, behavioral and social adjustment (Rutter, 1996; Ghodsian, Zajicek, & Wolkin, 1984). The use of parenting programs began in the 1960s and the use of groups to train parents began in the 1970s. The expansion of group-based parenting programs has taken place in a number of countries over the past decade, with the growing involvement of voluntary organizations in their provision. Parenting programs are now being offered in a variety of settings and a recent systematic review of randomized controlled trials (Bunting, 2004) showed that they are effective in improving behavior problems in young children. It is now thought to be important that parenting programs have a role to play in the improvement of maternal mental health.

It is problematic to keep adding components to a treatment that might enhance or indeed actually does enhance therapeutic change. From a methodological standpoint, demonstrating that any new component will make a difference can be quite difficult because of limitations in assessment (e.g., ceiling effects) and research design (e.g., sample sizes needed to show small increments in effects). The methodological and design constraints limit how much one can add to an evidence-based treatment and expect to show an effect, even if there is one. From a more clinical and service delivery standpoint, the strategy of adding components to treatment has further limitations (David, Miclea, & Opre, 2004). Patient attrition, already high in child, adolescent, and adult therapy (40%–60%) is a partial function of the demands made of the client (Kazdin, Holland, & Crowley, 1997) and the duration of treatment (Phillips, 1985). Adding a component to treatment that increases either one of these is quite likely to cause greater attrition so that fewer patients will complete treatment. Also, of course, there is the monetary cost. Improving treatment by adding components may add to the number of sessions and raise reimbursement issues and questions about incremental costs in relation to incremental benefits.

A few strategies have been proposed to enhance treatment effects. Raising the mean level for the entire group (that receives the extra treatment) may not be as important as targeting those who do not respond and raising just their mean (Kazdin, 2000). Understanding the mechanisms through which treatment leads to change is a strategy for enhancing treatment effects (see also, David & Szentagotai, 2006). It is still the case that we know very little about why treatments lead to change, even among the evidence-based treatments (Kazdin, 2000). This means that the treatments we are using, without any added components, may not be optimal. It may be premature to add further components to treatment without understanding how to optimize change in the treatment to which the components are added. Moreover, these components, even if they enhance outcome, further raise the importance of understanding mechanisms.

Barlow and Coren (2001) in their review researched if group based parenting programs are effective in improving maternal psychosocial health including anxiety, depression, and self esteem. The conclusion from 17 studies that matched the selection criteria was that group based parent training programs are effective in the short term in improving maternal depression, anxiety/stress, self esteem, and the mother's relationship with her partner and in the long term in improving self esteem.

It has also been suggested that the best predictor of parents' daily stress is the child's level of disruptive behavior (Plant & Sanders, 2007) and parental coerciveness is best predicted by child conduct problems (Bor & Sanders, 2004). Consequently, the authors were claiming that if disruptive behavior decreases as a result of parents implementing positive parenting and effective discipline routines, and the comparisons of standard with different type of enhancements put together were as effective as the standard behavioral intervention, there may be little room for adjunctive parenting interventions. Recently, Kaminski, Valle, Filene, and Boyle (2008) published a meta-analytic review of components associated with parent training program effectiveness. The study synthesized the results of 77 published evaluations of parent training programs (i.e., programs that included the active acquisition of parenting skills) to enhance behavior and adjustment in children aged 0-7. Characteristics of program content and delivery method were used to predict effect sizes on measures of parenting behaviors and children's externalizing behavior. After controlling for differences attributable to research design, program components consistently associated with larger effects included increasing positive parent-child interactions and emotional communication skills, teaching parents to use time out and the importance of parenting consistency, and requiring parents to practice new skills with their children during parent training sessions. Program components consistently associated with smaller effects included teaching parents problem solving; teaching parents to promote children's cognitive, academic, or social skills; and providing other, additional services. The authors claim that results have implications for selection and strengthening of existing parent training programs. No clear cognitive component designed to reduce parents' stress was taken into consideration in the review.

The aim of this review is to evaluate the effectiveness of group based cognitively enhanced behavioral parenting programs in reducing children's disruptive behavior and parent distress, by reviewing the data from existing studies which used rigorous methodological designs, and a range of standardized outcome instruments relevant to this purpose. The results will be used to inform the debate concerning the role and effectiveness of cognitively enhanced parenting programs.

Method

Criteria for considering the studies

Types of studies: Randomized controlled trials and quasi-randomized trials that used an enhanced form of parental training, by adding a cognitive component directed to reduce parental distress, for the tertiary prevention/treatment of disruptive behavior in children. The participants had to be randomly allocated to at least an experimental and other treatment group or a control group, the latter being a waiting-list, no-treatment or a placebo control group.

Types of participants: Parents of children with externalizing behavior.

Types of intervention: Parent training for reducing externalizing behavior in children, delivered in a group based format, enhanced with a cognitive component which addressed parental distress, which was delivered also in a group format.

Types of outcome measures: Inclusion of at least one standardized instrument measuring child behavior or parental distress.

Search methods

We conducted a search of English and non-English language articles published between January 1970 and July 2008 in a number of electronic databases. The following electronic databases were searched: Trip Database, Medline Journal articles, The Cochrane Library, ERIC, PsycINFO. Reference lists of articles identified through database searches were examined to identify further relevant studies. Bibliographies of systematic and non-systematic review articles were also examined to identify relevant studies.

The search terms used included the following: cognitive behavioral parent*or enhanced parent disruptive* or family intervention conduct* or parent training aggressive*or parent stress behavior. Filters appropriate to each database were used to locate potential quasi-randomized controlled trials and randomized controlled trials. Search terms were modified to meet the requirements of individual databases with regard to differences in fields and trial filters.

We included only controlled trials, in which participants had been randomly allocated to an experimental and a standard treatment group or a control group, the latter being a waiting-list, no-treatment or a placebo control group. Studies had to include at least one group-based parenting program for parents enhanced with a cognitive module for reducing parental distress.

Coding system

The treatment effect for each outcome in each study was standardized by dividing the mean difference in post-intervention scores for the intervention and treatment group by the pooled standard deviation, to produce an effect size (ES). The results were then combined in a meta-analysis using a fixed-effect model.

Effect sizes (Cohen's d) were calculated according to the procedures of Hunter and Schmidt (1990). More precisely, mean differences between cognitively enhanced parent groups and control/ standard parental intervention groups were calculated for each study and then divided by the pooled standard deviation (the sign plus signifying an effect in favor of cognitively enhanced groups). Based on Cohen's estimations, effect sizes have been categorized along a continuum of no effect (0–0.2), low effect (0.2–0.5), medium effect (0.5–0.8), and high effect (higher than 0.8). To estimate the overall effect of adjunctive CBT intervention, the 95% confidence interval for the effect size of cognitively enhanced parent intervention compared to control was calculated and then compared to zero. If the 95% confidence interval included zero, there would be no significant effect of cognitively enhanced condition. Next, effect sizes and 95% confidence intervals were calculated for each clinical outcome category; confidence intervals were assessed for their inclusion of zero to test the significance of individual category effects.

Results

Study selection and characteristics

The searches of electronic databases yielded a total of 1026 citations, of which 959 proved to be of no direct relevance to the review. Sixty-six studies were reviewed and 61 studies were excluded because the intervention did not contain a specific cognitive component for reducing parental distress, or the component was delivered to the children, or the component was delivered individually, or for methodological reasons. A total of 5 studies met all of the inclusion criteria and all of them provided sufficient data with which to calculate an effect size.

From the excluded studies it is worth mentioning the research of Wilson and White (2006), which although it had a specifically designed cognitive component, was not eligible because of methodological restrictions - it employed a single subject experimental design with 5 parents. The RCT conducted by Kazdin and Whitely (2003) on parent management training, enhanced with a parental distress reducing component, did not match the criteria because the additional component was delivered to the children. We had to exclude also the study conducted by Webster-Stratton & Hammond (1997) because although it does include the cognitive component, it was delivered to the children. The programs of Griest, Forehand, Rogers, Breiner et al. (1982) and Wells, Griest, and Forehand (1980) that examined the effectiveness of a self-control package in enhancing temporal generality of a parent training program were also excluded because the programs integrated the mother-child dyads that were treated individually.

The five included studies, involving a total of 1008 parents, provided data on two outcomes of interest — parental distress and children's behavioral

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problems. Only two studies provided data on a cognitive outcome, namely parents' sense of confidence.

Table 1. Characteristics of the included studies

Study ID	Methods	Outcomes
Sanders , Bor, Morawska (2007)	RTC with 3 year follow up data for the Sanders (2000) study	Problem child behavior Parenting Parent Distress Parental cognitions
Ireland, Sanders, Markie-Dadds (2003)	RTC with pre, post measurements and 3 month follow-up	Problem child behavior Parenting Parent Distress
Bor , Sanders , Markie-Dadds (2002)	RTC with pre, post measurements, 3 month follow-up and 1 year follow-up	Problem child behavior Parenting Parent Distress
Sanders, Markie-Dadds, Tully, Bor (2000)	Pre, post-treatment and 1 year follow-up	Problem child behavior Parenting Parent Distress Parental cognitions
Webster-Stratton (1994)	Pre, post-treatment and 3 month follow-up (not for the waiting list)	Problem child behavior Parenting Parent Distress

The content of the interventions was Enhanced Behavioral Family Intervention (EBFI; Level 5 Enhanced Triple P, Sanders et al., 2000), the intensive behavioral parent training component as in the Standard Triple P condition, and The Incredible Years Series (IYS, Webster-Stratton, 1994) with the Advance curriculum supplemented to the Basic parenting program. The Advance module of IYS series emphasizes skills such as anger management and coping skills (the others being communication, problem-solving and social support skills) and The Enhanced module of Triple P provides a cognitive conceptualization to the parents by identifying and challenging maladaptive cognitions about their child, themselves, child management routines, or other stressful situations and using coping self-statements.

Four selected studies for this review used the Enhanced Behavioral Family Intervention (EBFI; Level 5 Enhanced Triple P). Parents in the EBFI condition received the intensive behavioral parent training component as in the Standard Behavioral Family Intervention (SBFI) condition. Both conditions involve video content and standard protocols for the leaders and parents. On average, parents allocated to the SBFI condition participated in 10 sessions and the program involved teaching parents the core child management strategies. The

cognitive enhancement component of the module consists in teaching coping skills aimed to assist parents experiencing personal adjustment difficulties (e.g., depression, anger, anxiety, and stress) that interfere with their parenting ability. On average this module constituted 2 hours of the 14 hours of intervention provided to each participating family, but the 2 hours also included a partner support/social support intervention. On average, parents attended 12 appointments or about 14 hours of therapy to complete this intervention.

One study that met the selection criteria for the review used The Incredible Years Series (IYS), which is a program, intended to enhance children's social and emotional competencies and ultimately reduce behavior problems. The core parenting program, BASIC, runs for twelve to fourteen weeks and this curriculum emphasizes parenting skills which involve ways to play with your child, help your child learn, monitoring and supervision techniques, and discipline strategies. The BASIC parenting program was supplemented with the ADVANCE parenting curricula. Both conditions involve video content and standard protocols for leaders and parents. Table 2 summarizes the content/ delivery of programs and population characteristics of the 5 included studies.

Table 2. Content and participants of the studies

Study ID	Content/ Delivery	Children	Participants
1. Sanders, Bor, Morawska (2007)	Enhanced Behavioral Family Intervention (EBFI; Enhanced Triple P) and Standard Triple P (Sanders et al., 2000) SGTP incorporated 8 sessions. Families in the EGTP condition received SGTP plus 2 additional group sessions.	3 year old children with disruptive behavior. The sample was selected by Eyberg Child Behavior Inventory (ECBI Intensity score > 127 or Problem score >11/ Diagnostic Interview Schedule for Children–Parent version)	98 families that had children with conduct problems SGTP; <i>n</i> =50 EGTP; <i>n</i> =48
2. Ireland, Sanders, Markie-Dadds (2003)	Enhanced Behavioral Family Intervention (EBFI; Level 5 Enhanced Triple P) and Standard Triple P (Sanders et al., 2000)SGTP	Children aged between 2 and 5 years selected by Eyberg Child Behavior Inventory and Diagnostic Interview Schedule for Children–Parent version	37 couples experiencing child behavior problems and concurrent marital conflict SGTP; <i>n</i> =19 (16 at follow-up) EGTP; <i>n</i> =18 (16 at follow-up)

Table 2 (continued). Content and participants of the studies

3. Bor, Sanders, Markie-Dadds (2002)	Enhanced Behavioral Family Intervention (EBFI; Enhanced Triple P) and Standard Triple P SGTP (Sanders et al., 2000)	Children aged between 2 and 5 years with co-occurring disruptive behavior and attentional/hyperactive difficulties. Sample selected by Eyberg Child Behavior Inventory (ECBI Intensity score > 127 or Problem score > 11/ Diagnostic Interview DSM	63 families were selected that had children with co-occurring disruptive behavior and ADHD selected from the population of Sanders et al. (2000) study in the enhanced, standard and waiting list conditions EBFI; n=15 (13 at follow-up) SBFI; n=21 (19 at follow-up) WL; n=27
4. Sanders, Markie-Dadds, Tully, Bor (2000)	Enhanced Behavioral Family Intervention (EBFI; Enhanced Triple P) and Standard Triple P SGTP	3-year-old children with conduct problems Sample selected by Eyberg Child Behavior Inventory (ECBI Intensity score > 127 or Problem score > 11/ Diagnostic Interview Schedule for Children–Parent version	The total sample consisted of n = 234 families (without self directed intervention group) Parents were randomly assigned to the n= 58 for EBFI condition n=61 for SBFI condition n=71 in WL condition n = 112 families 1 year follow up (54 in EBFI, 58 in SBFI)
5. Webster-Stratton, (1994)	The Incredible Years Series (IYS) BASIC program was used, runs for twelve to fourteen weeks. The supplement was the ADVANCE parenting curricula which runs for ten to twelve weeks and emphasizes skills such as anger management and coping with difficult situations.	Children between 3-8 years old were included if they had a clinically significant number of behavior problems according to Eyberg Child Behavior Inventory (ECBI) and met the criteria of DSM for ODD, CD or both	n= 78 families (135 parents,77 mothers (5 of them adoptive) and 58 fathers) all attended the Basic program Parents were randomly assigned to (n=39 families) Basic (n=38 families) Advance Programs

A critical appraisal of the included studies was undertaken and Table 3 summarizes the results of the critical appraisal. None of the studies included in this review specified the method of allocation concealment and all the studies used rigorous methods of randomization. It has to be mentioned that in trials of parenting programs it is not possible to blind either facilitators or parents to the type of treatment being implemented or received. For this reason, one of the methods of minimizing bias arising from the failure to blind parents and study personnel is to blind the assessors of clinical outcomes. None of the included studies used outcome measures that required independent assessment because all of the studies used self-report measures and blinding was therefore inappropriate.

Table 3. Summary of the criteria of methodological adequacy

First author/year	Sanders, Bor, Morawska (2007)	Ireland, Sanders, Markie-Dadds (2003)	Bor W, Sanders, Markie-Dadds (2002)	Sanders, Markie-Dadds, Tully, Bor (2000)	Webster-Stratton (1994)
Size (n) in groups (“+++”>25, “+”=15-25, “-”<15)	++	+	+	++	++
Random assignment (‘+++’ = randomized: allocation concealment; ‘++’ = randomized: allocation not specified; ‘+’ = quasi- randomization)	+++	+++	+++	+++	+++
Attrition/drop-outs accounted for (%)	+(40.09)	+(14.52)	+(28)	+(40)	+(8.23)
Blinding to treatment/evaluation	Yes*	Yes*	Yes*	Yes*	Yes*
Follow up	3 years	1 year	1 year	3 month	3 month
Clinically important outcomes	Reported	**Reported	**Reported	Reported	**Reported
Distribution of confounders	+	+	+	+	+

*Archival data used for objective outcome assessment

**Except for the cognitive outcomes

All the studies report the distribution of possible confounders: specifically it was checked if the groups were similar at the start of the trial. The outcomes of interest were problem child behavior, parenting practices, parent distress and parental cognitions. The measures used were Parent Daily Report (PDR; Chamberlin & Reid, 1987), Eyberg Child Behaviour Inventory (ECBI; Eyberg & Pincus, 1999), Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993), Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995), Parenting Sense of Competency Scale (PSOC; Gibaud-Wallston & Wandersman, 1978), Dyadic Parent-Child Interaction Coding System (DPICS, Robinson & Eyberg, 1981) - Parent behaviors Subscale, The Brief Anger Aggression Questionnaire (BAAQ; Maiuro, Vitaliano & Cohn, 1987), Beck Depression Inventory (BDI, Beck, 1972), Parenting Stress Index (PSI, Abidin, 1983) and a Consumer Satisfaction Questionnaire (Sanders et al., 2000; Webster-Stratton, 1994).

The overall effect of cognitively enhanced parent training in comparison with control condition (i.e., waiting list and the standard behavioral based parent program) on all the dependent variables was extracted from a sample of 238 parents. The data shows a significant medium effect of the enhanced condition (0.61, 95% CI = 0.5 to 0.7). When extracting the results from studies regarding the effect of the enhanced condition at pre-post-intervention, the data from a population of 289 parents shows a large and significant effect size for the overall gains registered by the parents who participated in the cognitively enhanced group (0.83, 95% CI = 0.7 to 0.9). The overall gains in all the variables are maintained at follow up for the parents that attended the cognitively enhanced programs, the ES being medium-large (0.75, 95% CI = 0.5 to 0.9, n=283) and significant. The combined data on the enhanced versus standard programs post treatment show only a low improvement on all the dependent variables of interest (0.25, 95% CI = 0.2 to 0.3, n = 467) but the gains are maintained at follow up (0.25, 95% CI = 0.2 to 0.3).

Child disruptive behavior

Only two studies offered data for the comparison of EBPT with WL and data was derived from a participant total of 238 parents/ 119 couples. No data was provided from any study for comparing cognitively enhanced parent training with the waiting list at follow-up. The combined data shows a statistically significant and high effect size favoring the intervention group at post-intervention (0.75, 95% CI = 0.6 to 0.8) compared with the control group. The data shows that compared with the standard intervention, the enhanced version of the programs has slightly superior outcomes in terms of improving child disruptive behavior after the intervention (0.18, 95% CI = 0.1 to 0.2) and the improvements are maintained at follow-up but there are no longer significantly higher than the standard parenting program (0.23, 95% CI = -0.1 to 0.3).

Parenting practices

The effect size of cognitively enhanced programs on parental practices was extracted from four studies on a population of 289 parents and the data shows a high effect of the intervention at the end of the treatment (1.05, 95% CI = 0.9 to 1.1). When compared with the control condition, the extracted data from a sample of 238 parents shows a medium-large effect (0.73, 95% CI = 0.6 to 0.8) referring to the parenting skills. Interestingly, in terms of parenting practices, the effect size shows slightly but significant greater improvements for the parents that participated in the cognitively enhanced groups versus standard treatment after the interventions (0.25, 95% CI = 0.1 to 0.3, n = 467) measured as parents' self-reports, and also other-reported, changes which are maintained in the same low but significant range at follow-up (0.36, 95% CI = 0.2 to 0.5, n = 315).

Parental distress

There was no data available to compute the effect size of the cognitively enhanced condition versus the waiting list. However, on a sample of 457 parents it was shown that, when compared with the standard treatment, the level of parents' distress from the cognitively enhanced condition registers a low but significant ES after the interventions (0.32, 95% CI = 0.2 to 0.3). Further analysis show that the gains in terms of reduction of parental distress are maintained significant and at the same level at follow-up (0.36, 95% CI = 0.2 to 0.4, n = 315).

Parental cognitions

Only two studies used a cognitive outcome which referred to sense of competency cognitions. The aggregated data shows that compared to the waiting list, the parents who participated in the cognitively enhanced parent training show a medium ES in their sense of self-competency (0.49, 95% CI = 0.4 to 0.5, n = 238). However, the effect size regarding parents' sense of competency after the interventions is extremely low although significant when compared with the standard intervention after the training (0.06, 95% CI = 0.04 to 0.1, n = 238) and at follow-up (0.11, 95% CI = 0.1 to 0.11, n = 318).

Parents' satisfaction with the programs

Interestingly, there was a medium significant level ES in parents' satisfaction about the cognitively enhanced parent training in contrast with the standard training (0.60, 95% CI = 0.4 to 0.7, n = 318) as reported by them at the end of the programs.

Discussion

These results indicate that cognitively enhanced parenting programs can be highly effective in improving both child disruptive behavior and parental

distress and the improvements are maintained even at 3 years follow-up. However, cognitively enhanced programs add only a small effect when compared with the standard parent programs on all the studied outcomes but the improvement was constant also at follow-up. Further, the meta-analysis of the cognitive data showed no evidence of effectiveness of the cognitively enhanced condition in improving parents' sense of self-competence. This is a counter-intuitive finding given the name of the treatment, the type of variable, and the studies showing the implications of parental self-efficacy in parental distress. It seems that the effects of these cognitively enhanced parent interventions in lowering parental distress are not accompanied by the same effect on self-competency cognitions. A possible explanation for this result is that the cognitively enhanced programs may not have included any components to target this type of belief, since none of the programs describe exactly which type of beliefs they are addressing. Other explanations are that the cognitive enhancement was too weak or untimely, or that it might not be the cognitive component only that made the difference between the standard and the enhanced conditions. Therefore, these results are promising but there are a lot of missing pieces in finding out the real cognitive implications, since none of the enhancements is purely cognitive and the focus of the modules might not even be on the cognitions. More studies are needed to investigate which type of cognitions have to be addressed, how much focus to provide and when is an optimal time to offer the cognitive component, in order to obtain high effect sizes in reducing parental distress and children's problem behavior.

Another interesting finding, but consistent with cognitive-behavioral theory, is that in terms of parental practices, although the enhanced condition did not contain any teaching/ practicing of the parenting skills, there are medium size effect differences between the parents that participated in the cognitively enhanced groups versus the standard treatment after the interventions, changes which are maintained at follow-up. From the cognitive-behavioral perspective, by reducing parental distress, the parents were able to use their parenting skills. Another important aspect is that the satisfaction with the intervention was significantly higher for the cognitively enhanced treatment.

A number of limitations should be kept in mind in assessing the validity of these results. First, the number of studies is very small. Also, conclusions of this review rely heavily on numerical results from the reports of the included studies and, as such, may have been subject to a 'reporting bias'. As regards the issue of generalization, the range of the children's ages included in the studies is 2-8, so the conclusions reflect only preschool populations. The included studies were based on samples comprising both mothers and fathers, so the number of participating children was smaller. Not specified were the nature/ length of the cognitively enhanced module, taking into consideration that other subjects were addressed also (communication, parent/social support) in this enhanced intervention. There were no measures on types of cognitions or clear

specifications about the cognitions addressed in the cognitively enhanced module, although this approach to parent training is usually called cognitive behavioral, and so it would be expected to measure the etiopathogenetic mechanisms of parent distress.

Implications for practice

The results of this review are consistent with the findings of other reviews indicating the effectiveness of cognitive-behavioral parenting programs in improving a range of outcomes for both parents and children. The results showed that cognitively enhanced parenting programs improved the mental health of parents, their parenting practices and children's disruptive behavior both in the short term and in follow-up, ranging from 3 months to 3 years, the results were maintained. It was suggested 30 years ago that a cognitive component added to the standard behavioral parent programs could have the potential to contribute significantly to reducing children's antisocial behavior and improving parental psycho-social health (Griest et al., 1982; Wells, Griest, & Forehand, 1980), and therefore it is surprising that at present there were just a few studies incorporating these findings into this type of intervention, although children's behavioral problems are a high focus of concern in society and a priority of mental health care professionals. This review is suggesting that cognitively enhanced have the potential to impact on the mental health of parents as well as children. Even if they need more time and financial resources than the standard parenting programs, the cost-benefit ratio might be acceptable, once the one third of the population that does not benefit from the standard parental interventions are targeted. Research should be focused on the evidence-based cognitive/stress reduction components as beliefs are major components of distress (Szentagotai, 2006; Szentagotai & Freeman, 2007).

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Articles Section
