


The Effectiveness of Daily Behavior Report Cards for Children With ADHD: A Meta-Analysis

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Abstract

Objective: This meta-analysis examined group-design studies investigating the effectiveness of Daily Behavior Report Cards (DBRC) as a school-based intervention to manage the classroom behavior of students with ADHD. **Methods:** A search of three article databases (PsycINFO, ERIC and Medline) identified seven group design evaluations of DBRC interventions. This meta-analysis included a total of 272 participants, with an average age of 7.9 years old. Three of the studies compared a control group to a treatment group with randomized group assignment, one study compared a control group to three treatment groups, two studies compared pre-and post-treatment scores in the same group, and one study compared pre-and post-treatment results of two intervention groups without random assignment. Dependent measures for these studies were teacher ratings ($n = 5$) and systematic direct observation of student academic and social behaviour ($n = 2$). Standardized mean differences (*Hedge's g*) were calculated to obtain a pooled effect size using fixed effects. **Results:** DBRCs were associated with reductions teacher-rated ADHD symptoms, with a *Hedge's g* of 0.36 (95% CI: 0.12-0.60, $z=2.93$, $p \leq .005$) with low heterogeneity (Q -value: 2.40, $I^2 = 0.00$). This result excluded two studies that used observational coding instead of standardized tests to evaluate the effects of the intervention. A moderator analysis indicated that the effect size for systematic direct observation was large (*Hedge's G* = 1.05[95% CI: 0.66-1.44, $z=5.25$, $p \leq .00$]), with very high heterogeneity (Q -value: 46.34, $I^2: 93.53$). A second moderator analysis found differences in the effects of DBRCs for comorbid externalizing symptoms with an overall effect size of 0.34 (95%CI: -0.04-0.72, $z=1.76$, $p = 0.08$) with high heterogeneity (Q -value: 3.98, $I^2: 74.85$). **Conclusions:** DBRCs effectively reduce the frequency and severity of ADHD symptoms in classroom settings. Additionally, they have a significant effect on co-occurring externalizing behaviors. It appears that systematic direct observation may be a more sensitive measure of treatment effects compared to teacher ratings of ADHD symptoms. - (*J. of Att. Dis.* 2020; 24(12) 1623-1636)

Keywords

ADHD impairment, schools, teachers, parenting, treatment, meta-analysis

Objectives

ADHD affects approximately 5% of the school-age population and is characterized by developmentally inappropriate levels of inattention, hyperactivity, and impulsivity. Symptoms of ADHD are associated with significant impairments for children in the school setting (Rogers, Boggia, Ogg, & Volpe, 2015). These students encounter a wide array of challenges in academic settings in comparison with their peers without the disorder. They tend to underperform academically and are rated below their peers by parents on behaviors that enable academic success (Rogers et al., 2015). These impairments persist as children develop, with affected students being at increased risk for grade retention and non-completion of high school compared to peers without ADHD (Barbarelli, Katusic,

Colligan, Weaver, & Jacobsen, 2007). Children with ADHD face persisting academic difficulties that contribute to social, health, and economic problems later on (Currie & Stabile, 2006; Pingault et al., 2011). Considering the significant issues that children with ADHD face in school settings, several studies have evaluated the effectiveness of different types of interventions on elementary school children with ADHD.

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The most common treatments for children with ADHD are psychotropic medication and behavioral treatments in school and home settings (Barkley, 2006). Medication has been shown to reduce ADHD symptoms, disruptive behavior, and to lead to increases in on-task behavior and compliance to requests (Swanson, McBurnett, Christian, & Wigal, 1995). Stimulant medication has been found to improve academic productivity and accuracy (Connor, 2006) but has not been found to contribute to long-term improvements in academic achievement (The MTA Cooperative Group, 1999, 2004). Furthermore, the use of pharmacological intervention alone has its limitations. Some children do not respond to medication, others may experience negative side effects (Smith, Waschbusch, Willoughby, & Evans, 2000). Furthermore, some children and parents are opposed to medication and others take it inconsistently; research has shown low compliance with rates of non-adherence between 13.2 and 64% (Adler & Nierenberg, 2010).

Classroom interventions can help minimize difficulties at school and improve the overall classroom experience for students with ADHD, their teachers and their peers. Interventions that link school and home may be even more beneficial to improve the child's experience in both contexts (Power et al., 2012; Villodas, McBurnett, Kaiser, Rooney, & Piffner, 2014). There is a lack of data for academic outcomes, as most studies evaluating behavior interventions have focused on classroom behavior measures (Raggi & Chronis, 2006). Therefore, it is crucial to consider treatment options that are also geared toward improving academic functioning for children with ADHD, such as self-evaluation and other self-regulation interventions that have proven to have positive effects on behavior and academic performance (DuPaul, Weyandt, & Janusis, 2011).

An emerging body of literature has identified Daily Behavior Report Cards (DBRCs), also called Daily Report Cards or Home-School Notes, as an effective classroom intervention for children with ADHD (see Fabiano et al. 2010, Jurbergs, Palcic, and Kelley, 2007, Jurbergs, Palcic, and Kelley, 2010, Murray, Rabiner, Schulye, and Newitt, 2008, Owens et al. 2012, Watabe, Yujo, Stewart, Owens, Andrews, and Griffeth, 2013, Williams, Noell, Jones, and Gansle, 2012, McCain & Kelley 1993, McCain & Kelley 1994, McGoey, Prodan & Condit, 2007, Vujnovic, Fabiano, Pariseau, & Naylor, 2013, Leach and Ralph, 1986, Mautone, Marshall, Sharman, Eiraldi, Jawad, Power, 2012). This method first appeared in the literature as a "checklist" to document student behavior and reinforce the behaviors at home (Edlund, 1969). Mounting evidence suggests that DBRCs may be an effective behavior modification tool for children with ADHD (DuPaul & Eckert, 1997; Fabiano et al., 2007; Pelham & Fabiano, 2008; Pelham, Wheeler, & Chronis, 1998). Although DBRCs do not target academic outcomes directly, they often have an indirect effect by emphasizing academic enablers (Volpe et al., 2006; Fabiano

et al., 2010). Another advantage of DBRCs is that students may develop a more positive outlook towards school and perform better as a result of daily communication between the home and school (Fabiano et al., 2010). DBRCs also prove effective to treat ADHD symptoms and monitor outcomes (DuPaul & Eckert, 1997; DuPaul & Stoner, 2003; Kelley, 1990; O'Leary, Pelham, Rosenbaum, & Price, 1976; Owens, Murphy, Richerson, Girio, & Himawan, 2008; Pelham, Fabiano, & Massetti, 2005; Pelham et al., 1998). Finally, research suggests that the DBRC is an intervention that is easy to use and favored by both parents and teachers (Chafouleas, Riley-Tillman, & Sassu, 2006).

A DBRC typically consists of a list of a child's target behaviors that may include classroom interruptions, academic productivity, staying seated in class, as well as behavior in other areas of the school such as the library and cafeteria. The DBRC includes specific and measurable criteria for meeting each behavioral goal. For example, "child interrupts three or fewer times during Math class, leaves seat less than two times during each class, does not touch his/her friends during class time." DBRCs appear to be more effective when they start with fewer target behaviors with more added sequentially once the system is in place (Volpe & Fabiano, 2013). This also offers a beneficial transition phase for the child, teacher, and parent to adjust to the intervention.

It is thought that DBRC interventions are effective in reducing ADHD symptoms because of the collaborative role of students, teachers, and parents. Although implementation practices vary somewhat, typically, students receive an explanation of the intervention and are encouraged to share thoughts and opinions about the chosen behavioral goals. Teachers complete the daily report card each day and send it home to the student's parents. Teachers will suggest adjustments to the goals if they judge that it is necessary; usually, the goals can be met after a few months and new goals can be set for the student. Ideally, the teacher also provides immediate feedback to the student in class and makes an effort to motivate the child with praise and encouraging words to meet the DBRC goals. Parents receive the DBRC daily after school and are generally responsible for giving rewards based on the behavioral goals that were met (occasionally, rewards are given through the school). This reward system is established before starting the intervention and is revised by the student, the teacher, and in some cases, a supporting therapist. Parental reinforcement at home is thought to be a crucial component for the efficacy of DBRCs. Examples of home-based privileges may include playing outside, enjoying a special treat, or screen time. Parents often receive training to ensure their understanding of the DBRC and compliance. Further, parents are encouraged to maintain a positive rapport with the child regarding the DBRC when giving feedback and attributing the rewards; the DBRC should not be presented as a punishment or with negative consequences. Parents and teachers

are encouraged to celebrate the child's achievements, and when a target behavior has not been attained, a neutral attitude is encouraged (Volpe & Fabiano, 2013).

To date, the evidence on the effectiveness of DBRCs for children with ADHD has not been systematically evaluated. A meta-analytic review has investigated the efficacy of DBRCs for children without ADHD (Vannest, Davis, Davis, Mason, & Burke, 2010). This review examined intervention effects and measurement qualities of DBRCs from 17 studies, involving 228 study participants. The review also sought to examine a number of moderating variables: student characteristic variables, breadth of use, homeschool collaboration, scaling constructions, and reliability measurement. The effects of DBRCs showed an improvement on a range of outcomes (Vannest et al., 2010). Although this meta-analysis shows promising effects for DBRCs, Vannest and colleagues did not look at ADHD specifically. Given the severe academic and classroom-based difficulties experienced by students with ADHD, a synthesis of this literature is necessary and may provide important clinical implications.

Method

Protocol

This meta-analysis used the Cochrane Handbook for Systematic Reviews of Interventions to inform decisions and research design, the Quality Assessment Tool for Quantitative Studies (Effective Public Health Practice Project, 1998) developed by the Effective Public Health Practice Project to rate the quality of included studies, and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to present search results and selection of studies (see Appendix D).

Inclusion Criteria

Inclusion criteria were developed by the authors and cross-referenced with an expert in the field of DBRCs. Due to the lack of research on DBRCs, the authors purposefully chose broad and inclusive criteria to encompass the literature that exists on this subject.

Studies. All studies published in English were included. Unpublished reports, review papers, chapters, and book reviews were excluded to ensure quality of the included studies. In an effort to include all published studies on the topic, we checked for studies cited in these papers.

Participants. Male and female school-aged children (3-18 years) who had an ADHD diagnosis (any evidence of ADHD or ADD from any diagnostic settings) were included. Participants with comorbid diagnoses were included if they had also been diagnosed with ADHD. Participants who had an Autism diagnosis were excluded.

Intervention. Studies must have examined the effect of DBRCs as a classroom intervention for children with ADHD. The studies had to identify whether it was used in conjunction with any other intervention. The DBRC must have included a teacher rating component and back-up reinforcement (at home or at school). The ratings must have been done at least once a day, for it to be considered a daily report card.

Outcome measures. All outcome measures were accepted. The primary outcome of interest was the change in behavior, any change of ADHD symptoms in the classroom. The secondary outcome of interest was academic achievement and change in behavior at home.

Search Strategy

The primary author conducted the search strategy in collaboration with the coauthors. A research librarian assisted with the selection of databases and validated the search strategy that was developed. Literature searches in PsycINFO, ERIC, and MEDLINE were run to identify English language, published studies for possible inclusion in this meta-analysis. Search terms were used to identify the study population, intervention, and setting. Keywords and subject headings were modified to be appropriate to each database (full list of terms used in each database in the Appendix A). The reference lists of all included studies were also examined to locate any further studies. Zotero was used as a reference management tool to remove duplicates and in the screening process.

Selection Procedure

The primary author reviewed the titles and abstracts of identified articles ($n = 1,805$) to exclude irrelevant studies. The author and a group of graduate students filtered the full text and bibliographies of the remaining studies ($n = 125$) according to the inclusion criteria. Any study that was identified for inclusion by either coder was reassessed according to the criteria listed above to determine whether it should be included in the meta-analysis. From the identified studies, 17 met the inclusion criteria, and the reason for exclusion of each removed study was identified. Ten of the studies were only suitable for a narrative review because they did not meet our inclusion criteria for the statistical analysis. The remaining seven studies were included in this meta-analysis.

Data Extraction

The author extracted data from the included studies ($n = 7$) using a modified version of the "Data Extraction and Assessment Template" developed by the Cochrane Public Health Group. A second reviewer extracted the same data and both were compared for accuracy. The extracted data included

methods (study aim, design, study duration, follow-up times), participants (sample size, setting, diagnostic criteria, age, sex, country, medication), intervention group (number of intervention groups, name of groups, number randomized to each group, intervention details), comparison group (number of comparison groups, name of groups, number randomized to each group, intervention details), outcome measure (outcome definition from the study, sample size, time points measures/ reported, quantitative evidence at follow-ups), descriptive results (if any), and other (key conclusions of the study authors and references to other relevant studies). Study authors were contacted for any missing information.

Statistical Analysis

The dependent measures for the included studies were teacher ratings ($n = 5$) and systematic direct observation of student academic and social behavior ($n = 2$). ADHD control groups and ADHD treatment groups were compared for five studies, and pre- and posttreatment differences were used for the remaining two studies. All data were continuous, thus mean standard deviation and sample size were used to calculate and compare the standardized mean differences (Hedges's g) to obtain a pooled effect size using fixed effects. The effect sizes and 95% confidence intervals (CIs) were calculated using the Comprehensive Meta-Analysis (CMA) software. Heterogeneity tests were also calculated using CMA for all analyses.

Results

Demographic Information

Three studies compared a control group with a treatment group (Fabiano et al., 2010; Murray, Rabiner, Schulte, & Newitt, 2008; Vujnovic, Fabiano, Pariseau, & Naylor, 2013); one study compared a control group with three treatment groups (Jurbergs, Palcic, & Kelley, 2010); two studies examined pre-and post-treatment differences in the same group (Owens et al., 2012; Watabe, Yuko, Stewart, Owens, Andrews, & Griffeth, 2013); and one study compared pre-and posttreatment results of two intervention groups (Williams, Noell, Jones, & Gansle, 2012). In all studies, students were randomly assigned to groups. Due to differences in some DBRCs, we did not include the following treatment groups: school-home note without response cost (Jurbergs, Palcic, & Kelley, 2007) and DBRC with performance feedback (Williams et al., 2012). Note that the subgroup with response cost ($n = 6$) and the subgroup that did not receive performance feedback ($n = 15$) in each of these studies were still included (publication year ranged from 2007 to 2013).

The majority of the interventions were implemented in public classroom settings, with one being implemented in a private school, and there was a range in socio-economic

status of the subjects. The average age of participants was 7.9 years. This calculation did not include the Williams et al. (2012) study because no age information was provided. However, the authors specified that the participants were in Grades 1 through 5, suggesting an age range of 6 to 11 years. In total, 81.3% of participants were male, although gender information was missing from the Jurbergs et al. (2007) article. The majority of participants were of Caucasian or African American ethnicity, with a small percentage of mixed race students. Participants were only included in the intervention if they had an ADHD diagnosis and in some cases, a teacher referral was required.

Diagnostic Information

Participants did not have an official diagnosis in the Williams et al. (2012) study, but children had elevated ADHD scores (i.e., T -score of 64 on ADHD Index on Conners' Rating Scales-Revised Teacher Version short form). For Owens et al. (2012), no ADHD diagnosis was required for participation but 71.43% of the sample met diagnostic criteria for ADHD. The five other studies indicated that they used best practice guidelines for ADHD diagnosis, which included diagnosis by a physician or psychologist, multiple respondents on standardized rating scales, and at least one respondent using a clinical interview. All students and parents participated voluntarily in all studies.

Details of Interventions

Teachers implemented the intervention in all studies, with parents reinforcing the behavior at home with rewards. Additionally, a third person helped with the development and implementation of the DBRCs and offered follow-up meetings to support teachers and families. The third parties included School Psychologists, study researchers, or other School Mental Health Professionals. The mean treatment time was 3.7 months for five of the interventions, while the other two interventions did not report the duration of treatment. Treatment integrity was measured for four out of seven of the articles, three of those articles provided quantitative reports, while one provided a narrative report. However, we could not compare data on treatment integrity due to its heterogeneity. The DBRCs were personalized to each student and therefore had slight variations. However, there were some similarities such as 86% ($n = 6$) of the interventions implemented a DBRC with academic and behavioral goals, while the seventh intervention only included behavioral goals (Williams et al., 2012). The academic goals included Individual Education Plan goals, work completion, and staying focused during work time. The behavior and social goals included paying attention, sitting still in seat, following directions, getting along with classmates, and raising hand to speak. Three articles used a

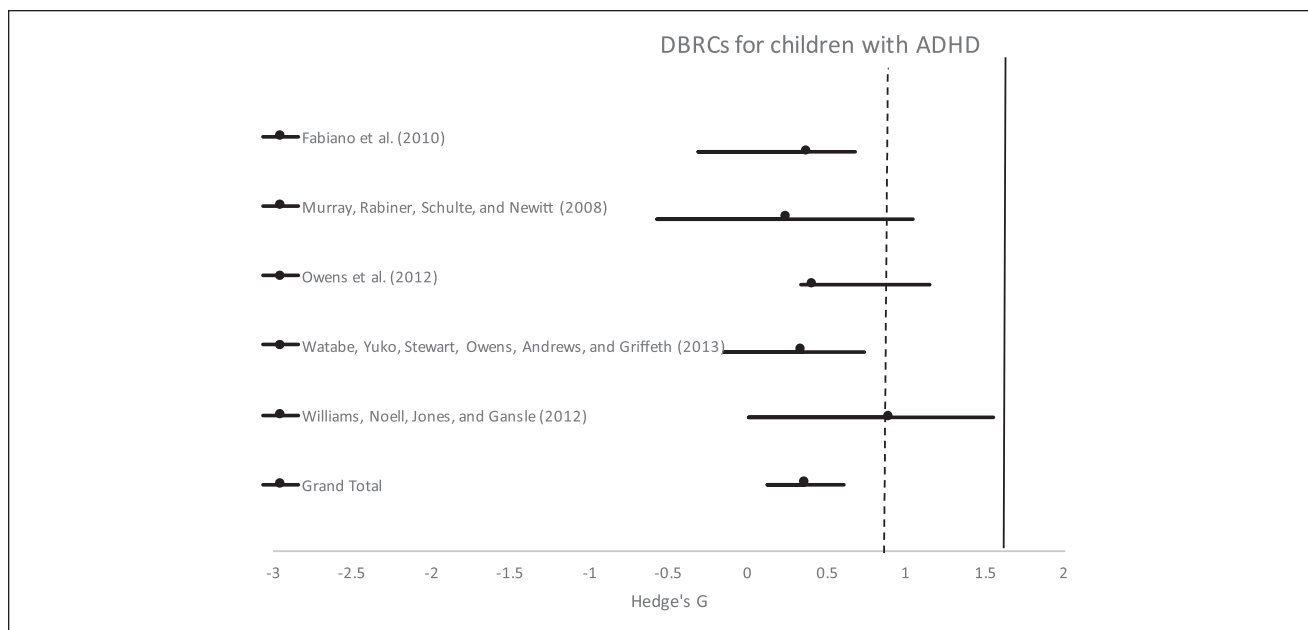


Figure 1. Forest plot of studies included in final meta-analysis.
Note. DBRC = daily behavior report cards.

DBRC with response cost. Six articles reported the number of target behaviors used on DBRCs, ranging from two to four items. Refer to Appendix B for a breakdown of all data information in the studies.

Outcome Measurement

Intervention outcomes included both rating scales and direct observations. Two articles used rating scales and direct observations to evaluate intervention outcomes, another two used direct observations only, and three used standardized tests only. In the two Jurbergs's studies, the direct observations coded on-task and off-task behavior of students during 15 second intervals while working on an assignment. In the Williams et al. (2012) study, inappropriate behaviors chosen by the teacher were being recorded during the 15 second intervals of direct observation. The behaviors were talking and making noise, getting out of seat, and touching others. In the Fabiano et al. (2010) study, observers counted the frequency of seven operationalized behaviors (be respectful of others, obey adults, work quietly, use materials and possessions appropriately, stay in assigned seating area, raise your hand, stay on task). The main overall effect size was computed based on both types of outcome data (standardized rating scales and observations). A second effect size was computed without the direct observation results (see Appendix C).

Meta-Analytic Findings

Results indicated that DBRCs were associated with reductions in teacher-rated reports of ADHD, with a Hedges's

g of 0.53 (95% CI = [0.30, 0.76], $z = 4.44$, $p \leq .00$), indicating a moderate effect size. The heterogeneity test results indicated high heterogeneity (Q value = 46.22, $I^2 = 87.02$). This lack of homogeneity can be explained by the markedly different outcome measures used in the Jurbergs et al. (2007) and Jurbergs et al. (2010) studies. The observational coding appeared to have a significantly higher sensitivity to the DBRCs than the standardized questionnaires, likely due to their better correspondence to target behaviors. That is, the observational studies coded on-task behavior, which resulted in higher effect sizes. By contrast, standardized rating scales encompass more general and broad outcomes, and therefore may be less sensitive to the measures effects of the intervention.

A separate analysis was run without the two Jurbergs studies, yielding an overall Hedges's g of 0.36 (95% CI = [0.12, 0.60], $z = 2.93$, $p \leq .003$). This analysis also resulted in a lower heterogeneity (Q value = 2.37, $I^2 = 0.00$).

Moderator Analyses

The moderator analysis confirmed this important difference between types of dependent measures. The Hedges's g for effect size of systematic direct observation was 1.05 (95% CI = [0.66, 1.44], $z = 5.25$, $p \leq .00$) with very high heterogeneity (Q value = 46.34, $I^2 = 93.53$). The calculated Hedges's g for results analyzed from standardized testing was 0.36 (95% CI = [0.12, 0.60], $z = 2.93$, $p \leq .003$). The heterogeneity was low (Q value = 1.24, $I^2 = 0.00$).

A second moderator analysis found a significant effect of DBRCs on comorbid externalizing behaviors

(i.e., oppositional and conduct problems). The overall effect size for other externalizing behavior was 0.39 (95% CI = [-0.005, 0.78], $z = 1.99$, $p = 0.08$). Heterogeneity was (Q value = 3.43, $I^2 = 70.85$). This analysis included both teacher and parent ratings.

Discussion

This meta-analysis investigated the effect of DBRCs as a classroom intervention for children with ADHD. The meta-analysis demonstrated that DBRCs are effective in significantly reducing teacher-rated symptoms of ADHD. A moderator analysis indicated that the intervention also had a significant effect on reducing externalizing behaviors. These findings are in line with results from other systematic reviews examining the effects of DBRCs in non-ADHD children. The primary outcome of interest was the reduction of ADHD symptoms in the classroom. Although we were interested in examining how DBRCs affect academic achievement and change in behavior at home, the lack of information found in the included studies limited this analysis to classroom behavioral outcomes only.

Due to the high heterogeneity of the overall effect size, separate analyses were run for systematic direct observation and standardized testing outcome measures, suggesting that DBRCs are more effective when outcomes were measured with direct observation. However, it was also effective when measured with standardized rating scales. This division in the statistical analysis reduced the heterogeneity of the studies that used standardized tests. The heterogeneity of the effect size using observational coding remained very high. This can be explained by low interrater reliability for observational coding and the variance that can be found when recording observations from one child to another. Further research is needed to identify particular outcome measure characteristics that may optimize treatment outcomes.

Despite the heterogeneity of the included studies, the strength of evidence and the concordance of results with other systematic reviews provide strong support for the use of DBRCs as a classroom intervention for children with ADHD. DBRCs improve communication between families and schools, focus on the child's strengths, and create a positive rapport with the child. Effective communication between teachers and parents of children with ADHD is critical (e.g., Rogers, Wiener, Marton, & Tanock, 2009), and the DBRC provides a proactive way of dealing with behavior issues that arise at school. They may also play a preventative role by identifying and addressing problems in their early stages. Finally, DBRCs may be presented as a constructive tool for the child rather than a punishment, thereby enhancing the acceptability and efficacy of the intervention tool.

A limitation of this meta-analysis is the small number of studies included - a reflection of the lack of research in this area. Although we included all existing evidence-based published articles, more research is needed to include important covariates such as sex, ADHD subtype, and socioeconomic status. The lack of homogeneity in the comparison groups used among studies is also a source of variability. While some studies examined changes in one group over time, others compared an experimental group to a control group. DBRCs are personalized interventions that vary from one child to another, which creates difficulty when comparing their effectiveness. The structure of the DBRC, the way it is administered by teachers, and the reward systems of parents vary immensely. Further research addressing this topic is required before drawing more conclusions on a variety of outcomes. Specifically, participant information and replicable details of methods used to assess the effectiveness of the intervention should be included in future articles. More information about diagnosis, participant information, and data collection methods should also be included for future meta-analyses to draw more detailed conclusions. There is a possibility of publication and language bias since unpublished studies were excluded and only studies that were published in English were included.

Four studies measured integrity and three measured acceptability, with results presented descriptively for both. These were not synthesized due to their heterogeneity. The tools to measure integrity and acceptability varied, and the information yielded did not come from parents or teachers uniformly. The discussions mentioned positive integrity to the treatment, whether addressing parents, teachers, or students. Studies that measured acceptability described the intervention as moderately and highly acceptable to teachers, parents, and children.

Conclusion

Results from this meta-analysis suggest that DBRCs reduce the frequency and severity for ADHD symptoms in classroom settings. In addition, they have a significant effect on externalizing behaviors and seem to be more effective when observational coding is used to measure ADHD symptoms. The successful interventions identified appropriate target behaviors for the students, ensured the parent's consistent participation, and lasted at least 1 month. The findings offer an overview of the existing research on DBRCs for children with ADHD and classroom behavior, with important implications for clinicians, parents, and teachers, who are supporting children with ADHD. Subsequent research on this topic should investigate additional mediator and moderator variables that may have a significant influence on the efficacy of this intervention for children with ADHD.

Appendix A

PsychINFO	Date searched: 2015-10-15	Results
Concept 1		
1	attention deficit disorder with hyperactivity/	22205
2	(attention deficit disorder with hyperactivity OR adhd).ti,ab	16620
3	attention deficit disorder/	22205
4	attention deficit disorder.ti,ab	1529
5	hyperkinetic reaction of childhood.ti,ab	6
6	minimal brain damage.ti,ab	79
7	disruptive behavi*.ti,ab	2616
8	or/1-7	28269
Concept 2		
9	daily behavio* report card*.ti,ab	25
10	school based intervention/	12458
11	classroom behavior modification/	0
12	school based intervention*.ti,ab	1211
13	classroom behavior modification.ti,ab	19
14	((classroom* or school*) adj3 intervention*).ti,ab	6409
15	(behavio* adj3 modif*).ti,ab	9572
16	daily report card*.ti,ab	51
17	home-school note*.ti,ab	7
18	home-based reinforcement.ti,ab	28
19	or/9-18	27636
Concept 1 and Concept 2		
20	and/8,19	1107
Medline	Date searched: 2015-11-02	Results
Concept 1		
1	attention deficit disorder with hyperactivity/	
2	(attention deficit disorder with hyperactivity OR adhd).ti,ab	
3	attention deficit disorder/	
4	attention deficit disorder.ti,ab	
5	hyperkinetic reaction of childhood.ti,ab	
6	minimal brain damage.ti,ab	
7	disruptive behavi*.ti,ab	
8	or/1-7	
Concept 2		
9	daily behavio* report card*.ti,ab	
10	school based intervention/	
11	classroom behavior modification/	
12	school based intervention*.ti,ab	
13	classroom behavior modification.ti,ab	
14	((classroom* or school*) adj3 intervention*).ti,ab	
15	(behavio* adj3 modif*).ti,ab	
16	daily report card*.ti,ab	
17	home-school note*.ti,ab	
18	home-based reinforcement.ti,ab	
19	or/9-18	
Concept 1 and Concept 2		
20	and/8,19	

(continued)

Appendix A (continued)

ERIC	Date searched: 2015-11-02	Results
Concept 1		
1	attention deficit and hyperactivity disorder	4,912
2	ti(attention deficit disorder and hyperactivity or adhd) OR ab(attention defic	4792
3	attention deficit disorder	6069
4	ti(attention deficit disorder) OR ab(attention deficit disorder)	4053
5	ti(hyperkinetic reaction of childhood) OR ab(hyperkinetic reaction of childho	0
6	ab(minimal brain damage) OR ti(minimal brain damage)	31
7	ab(disruptive behvi*) OR ab(disruptive behavi*)	2259
8	1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7	8352
Concept 2		
9	ti(daily behavior report card*) OR ab(daily behavior report card*)	59
10	school based intervention	10312
11	ab(school based intervention) OR ti(school based intervention)	6572
12	classroom behavior modification	2736
13	ab(classroom behavior modification) OR ti(classroom behavior modification)	597
14	ab(((classroom* OR school*) N/3 intervention*)) OR ti(((classroom* OR scho	5436
15	ab(behavio* NEAR/3 modif*) OR ti(behavio* NEAR/3 modif*)	2778
16	ab(daily report card*) OR ti(daily report card*)	145
17	ab(home-school NEAR/2 note*) OR ti(home-school NEAR/2 note*)	10
18	ab(home-based reinforcement) OR ti(home-based reinforcement)	81
19	9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18	18121
Concept 1 and Concept 2		
20	8 AND 19	924

Appendix B

Study	a. Type of comparison b. study duration	Publication year	Setting + who implemented the intervention	Ages	Gender	Ethnicity	Entrance criteria for the intervention program	Treatment integrity and acceptability	DRC focus
Fabiano et al. (2010)	a. Treatment versus control (both were ADHD groups—randomly assigned) b. 8 months	2010	Classroom School psychology graduate student consultants assigned to work with a family and teacher (worked with them to develop the DRC, and then follow up to refine target behaviors and then troubleshoot, three initial visits and then monthly meetings) Inner-city elementary school primarily serving low-income children <ul style="list-style-type: none"> The researcher met with families and teachers before implementation of the treatment and to set the contingencies appropriately. The researcher renegotiated the contracts several times throughout the treatment phases (for motivation) 	8.17	86% males	79% Caucasian, 13% African American, 8% mixed race	ADHD diagnosis	Integrity: Not reported Acceptability: Parent and teacher ratings of Consumer Satisfaction reported	IEP goals and social/behavioral goals
Jurbergs, Palcio, and Kelley (2007) N = 6	a. One intervention group with three interventions (randomly assigned each day): <ul style="list-style-type: none"> School-home note without response cost School-home note with response cost Follow-up (with response cost) b. Study duration not reported	2007	<ul style="list-style-type: none"> The researcher met with families and teachers before implementation of the treatment and to set the contingencies appropriately. The researcher renegotiated the contracts several times throughout the treatment phases (for motivation) 	7 years	?	African American	<ol style="list-style-type: none"> Teacher referral for problematic classroom behavior. A diagnosis of ADHD (Connors). Significant levels of off-task behavior during baseline observations (greater than 50% off-task). Average scores on six subsets of the Woodcock-Johnson Test of Achievement—Third Edition. Member of an ethnic minority group, and Student at an inner-city elementary school primarily serving low-income children 	Integrity: Parents were compliant in reviewing the note and providing consequences, one parent forgot to return the note several times. Acceptability: mothers found it helpful, would recommend, participants wanted to continue with the school-home note and teachers noticed improvements	"Used class time well" and "completed classwork" with response cost
Jurbergs, Palcio, and Kelley (2010)	a. Treatment versus control—randomly assigned b. Duration not reported	2010	Public schools <ul style="list-style-type: none"> Teachers implemented, before starting the treatment students and teachers were taught the procedure for the teacher to "check-in" with a script for the teacher to explain to the student why they got each target rating 	Average: 7.4	74.4% males	African American	ADHD diagnosis, 33/43 participants were taking ADHD medication	Integrity: Integrity of teachers was measured, all parents met the minimum treatment integrity criteria of 80%	"Paid attention in class" "Followed directions" "Sat still in seat." "Got along with classmates" with response cost
Murray, Rabiner, Schulte, and Newitt (2008)	a. Treatment versus control (both ADHD groups—randomly assigned) b. One school semester	2008	Two traditional elementary school: A Humanities magnet school with enrollment based on parent application as well as district assignment, and one school on a year-round schedule with enrollment based on parent choice.	Mean: 8.50	71% males	One third African American and the remainder Caucasian	ADHD diagnosis	Integrity: DRC completion was relatively stable across 4 months of intervention (73%-85%) Acceptability: Highly acceptable to teachers, parents, and children	Individualized target behaviors and academic performance goals. Raise hand and wait to be recognized, complete assignments, follow directions with 0-1 reminders, use class time well (in designated areas and no playing or talking when it is work time) with response cost

(continued)

Appendix B (continued)

Study	a. Type of comparison b. study duration	Publication year	Setting + who implemented the intervention	Ages	Gender	Ethnicity	Entrance criteria for the intervention program	Treatment integrity and acceptability	DRC focus
Owens et al. (2012)	a. Same group baseline and end of treatment b. 4 months	2012	School <ul style="list-style-type: none"> Teachers implemented the DRC, received year-long collaborative teacher consultation. Parents were offered behaviorally based parent sessions either individually or in a group 	8.5	87.9% males		ADHD diagnosis, 17/66 participants were medicated at referral Students who demonstrated disruptive behavior problems in the classroom setting. Referred by school personnel, attention and hyperactivity problems	Integrity: not reported Acceptability: not reported	Remains seated, raises hand to speak, completes 75% of daily math work no response cost
Wacabe, Yuko, Stewart, Owens, Andrews, and Griffith (2013)	a. One group pre- and posttreatment b. 51 days	2013	School <ul style="list-style-type: none"> Poverty rates exceeded state's averages (southeast Ohio) SMHP met with teachers to set the target behaviors, then child and parent implementation. Teachers were offered a 2 hr training session initially and then brief behavioral consultation sessions with SMHPs twice a month <p>SMHPs met with the child participants to reinforce DRC procedures and child progress. The contacts varied in nature and frequency; clinicians met with some children on an as-needed basis, while others received more structured reinforcement on a weekly basis to supplement or substitute for home-based rewards.</p>	Mean: 7.85	87.80% males	93.9% Caucasian	ADHD diagnosis, 30.00% of children were on medication at referral	Integrity: Teachers completed the DRC on 87.5% of school days. Children achieved their goals on 78.39% of days, thus, the criteria were set at appropriate levels for most children. Acceptability: not reported	Saying in seat, raising hand to speak, and completing school work (two to four target behaviors) no response cost
Williams, Noell, Jones, and Gansle (2012)	a. Type of comparison: Treatment group versus control group (two treatment groups: E-mailed DBRC and e-mailed DBRC with performance feedback)—randomly assigned b. Study duration: 3 weeks	2012	One public school and one private school <ul style="list-style-type: none"> Researcher explained procedure of DBRC to teachers and parents, no training 	Age: ? First grade: 4 Third grade: 38 Fourth grade: 2 Fifth grade: 2	80.4% males	40 Caucasian (non- Hispanic) and six African American	Entrance criteria for the intervention program: Students were asked if they were medicated Teachers referred students exhibiting behavior concerns	Integrity: not reported Acceptability: Teachers perceived the intervention moderately acceptable, as indicated by a preintervention total mean of 4.7 and postintervention total rating of 4.8 on a 6-point scale. (RP-15 Martens et al. 1985)	Stayed seated Completed work Talked appropriately Followed directions Completed assignments no response cost

Note. IEP = individualized education plan; SMHP = school mental health professionals; DBRC = daily behavior report cards; DRC = daily report cards.

Appendix C

Characteristics of All Studies Included in Final Meta-Analysis.

Fabiano et al. (2010)		Control group		Treatment group	
Measure		<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
Objective classroom observations: Average frequency count of classroom rule violations		12.02 (23.1)	30	7.6 (23.2)	33
ADHD symptoms/impairment: DBD/ADHD		1.23 (0.65)	30	1.05 (0.65)	33
ADHD symptoms/impairment: IRS average score		3.48 (1.70)	30	2.44 (1.46)	33
Total effect size (Hedges's <i>g</i>)				0.37	

Jurbergs, Palcic, and Kelley (2007)	Treatment Group 1 (no response cost)		Treatment Group 2 (with response cost)		Treatment Group 3 (follow up with response cost)	
	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
Mean percentage of time spent on task	86.5 (10.5)	6	88.3 (7.5)	6	95.1 (2.5)	6
Total effect size (Hedges's <i>g</i>)			11.43			

Jurbergs, Palcic, and Kelley (2010)	Control group		Treatment group	
	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
Observational coding for off-task/on-task behavior	40.6 (17.3)	16	86.6 (6.8)	14
Total Effect Size (Hedges's <i>g</i>)			3.31	

Murray, Rabiner, Schulte, and Newitt (2008)	Control group		Intervention group	
	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
SKAMP total—Teachers	1.26 (0.64)	9	1.11 (0.58)	15
Total effect size (Hedges's <i>g</i>)			0.24	

Owens et al., 2012	Pretreatment		Posttreatment	
	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
DBD Rating Scale and IRS	0.61 (1.35)	35	0.24 (0.76)	35
Total effect size (Hedges's <i>g</i>)			0.33	

Watabe, Yuko, Stewart, Owens, Andrews, and Griffeth (2013)	Teacher ratings			
	Pretreatment		Posttreatment	
Measure	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
DBD Rating Scale (inattention)	2.23 (0.67)	40-41	1.93 (0.77)	39-41
DBD Rating Scale (hyperactivity/impulsivity)	1.84 (0.81)	40-41	1.71 (0.71)	39-41
IRS overall	4.51 (1.14)	40-41	4.37 (1.37)	39-41
Total effect size (Hedges's <i>g</i>)			0.34	

Measure	Parent ratings				Teacher ratings			
	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>
DBD ODD	1.24 (0.77)	35-39	1.04 (0.68)	34	1.21 (0.82)	40-41	1.12 (0.82)	39-41
DBD CD	0.35 (0.41)	35-39	0.28 (0.33)	34	0.64 (0.63)	40-41	0.56 (0.61)	39-41
Total effect size (Hedges's <i>g</i>)					0.39			

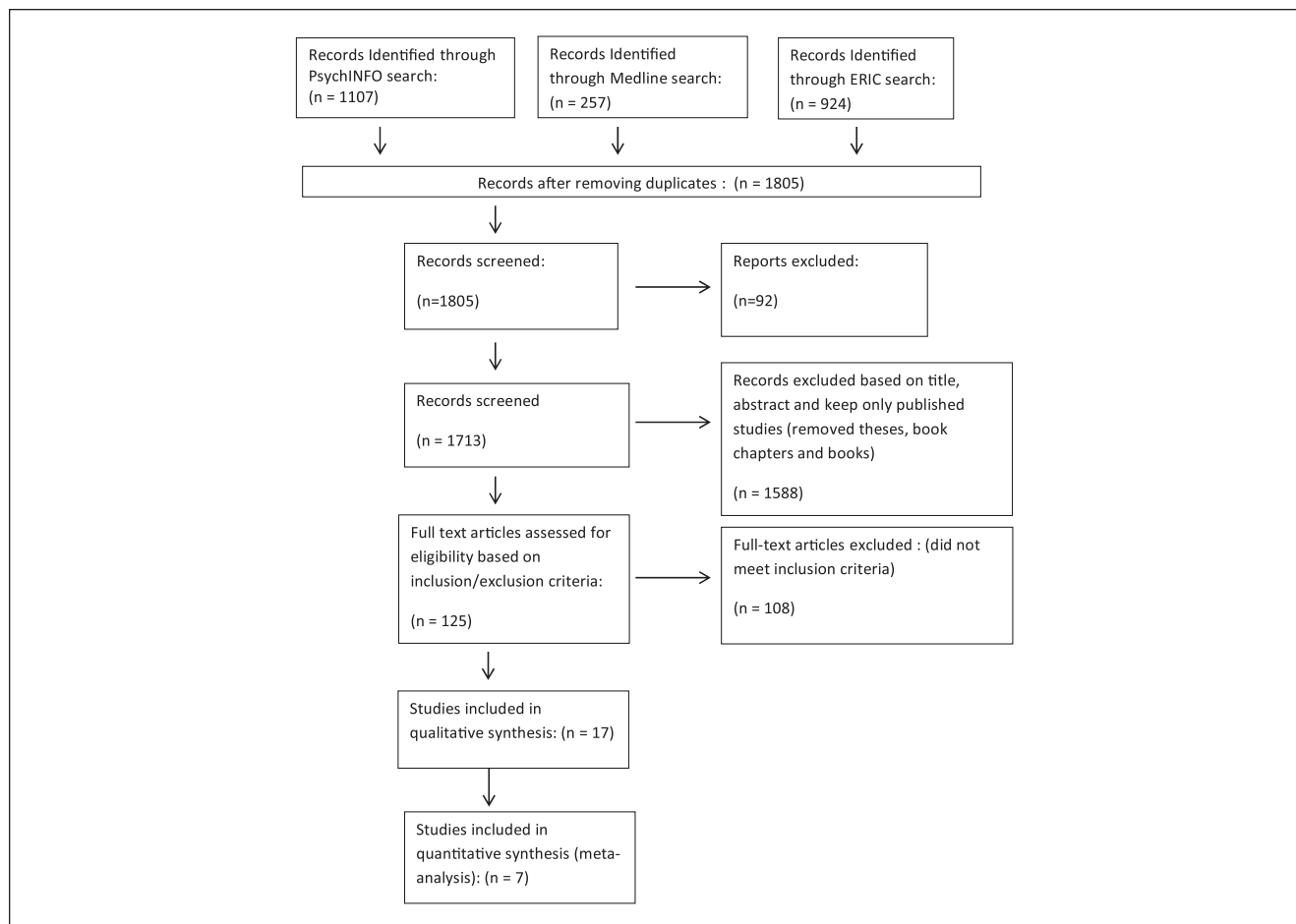
(continued)

Appendix C (continued)

Williams, Noell, Jones, and Gansle (2012)	Control group		Intervention group	
	M (SD)	n	M (SD)	n
Measure				
% intervals of disruptive behavior	59.4 (19.5)	15	22.9 (19.3)	15
CBCL-TRF internalizing	53.0 (9.2)	15	43.1 (6.7)	15
CBCL-TRF externalizing	58.4 (4.4)	15	52.0 (7.8)	15
CBCL-TRF total problems	58.8 (5.0)	15	55.3 (4.3)	15
Conners' Teachers ADHD Index	60.0 (5.6)	15	62.5 (11.0)	15
Total effect size (Hedges's <i>g</i>)			0.89	

Note. DBD = disruptive behavior disorder; IRS = Impairment Rating Scale; ODD = Oppositional defiant disorder; CD = conduct disorder; CBCL = Child Behavior Checklist; SKAMP = Swanson, Kotkin, Agler, M-Flynn, and Pelham Scale; TRF = Teacher Reported Form.

Appendix D



PRISMA flow diagram.

Note. PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

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References

- Adler, L. D., & Nierenberg, A. A. (2010). Review of medication adherence in children and adults with ADHD. *Postgraduate Medicine, 122*, 184-191.
- Barbaresi, W. J., Katusic, S. K., Colligan, R. C., Weaver, A. L., & Jacobsen, S. J. (2007). Long-term school outcomes for children with attention-deficit/hyperactivity disorder: A population-based perspective. *Journal of Developmental & Behavioral Pediatrics, 28*, 265-273.
- Barkley, R. A. (2006). *Attention deficit hyperactivity disorder: A handbook for diagnosis and treatment* (3rd ed.). New York, NY: Guilford Press.
- Chafouleas, S. M., Riley-Tillman, T. C., & Sassu, K. A. (2006). Acceptability and reported use of daily behavior report cards among teachers. *Journal of Positive Behavior Interventions, 8*, 174-182.
- Connor, D. F. (2006). Stimulants. In R. A. Barkley (Ed.), *Attention-deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (3rd ed., pp. 608-647). New York, NY: Guilford Press.
- Currie, J., & Stabile, M. (2006). Child mental health and human capital accumulation: The case of ADHD. *Journal of Health Economics, 25*(6), 1094-1118.
- DuPaul, G. J., & Eckert, T. L. (1997). The effects of school-based interventions for attention deficit hyperactivity disorder: A meta-analysis. *School Psychology Review, 26*(1), 5-27.
- DuPaul, G. J., & Stoner, G. D. (2003). *ADHD in the Schools: Assessment and intervention strategies*. New York, NY: Guilford Press.
- DuPaul, G. J., Weyandt, L. L., & Janusis, G. M. (2011). ADHD in the classroom: Effective intervention strategies. *Theory Into Practice, 50*(1), 35-42.
- Edlund, C. V. (1969). Rewards at home to promote desirable school behavior. *TEACHING Exceptional Children, 1*, 121-127.
- Effective Public Health Practice Project. (1998). *Quality assessment tool for quantitative studies*. Hamilton, ON: Author. Retrieved from <http://www.ephpp.ca/index.html>
- Fabiano, G. A., Pelham, W. E., Gnagy, E. M., Burrows-MacLean, L., Coles, E. K., Chacko, A., . . . Robb, J. A. (2007). The single and combined effects of multiple intensities of behavior modification and multiple intensities of methylphenidate in a classroom setting. *School Psychology Review, 36*, 195-216.
- Fabiano, G. A., Vujnovic, R. K., Pelham, W. E., Waschbusch, D. A., Massetti, G. M., Pariseau, M. E., . . . Volker, M. (2010). Enhancing the effectiveness of special education programming for children with attention deficit hyperactivity disorder using a daily report card. *School Psychology Review, 30*, 219-239.
- Jurbergs, N., Palcic, J. L., & Kelley, M. L. (2007). School-home notes with and without response cost: Increasing attention and academic performance in low-income children with attention-deficit/hyperactivity disorder. *School Psychology Quarterly, 22*, 358-379. doi:10.1080/07317107.2010.500501
- Jurbergs, N., Palcic, J. L., & Kelley, M. L. (2010). Daily behavior report cards with and without home-based consequences: Improving classroom behavior in low income, African American children with ADHD. *Child & Family Behavior Therapy, 32*, 177-195. doi:10.1080/07317107.2010.500501
- Kelley, M. L. (1990). *School-home notes: Promoting children's classroom success*. New York, NY: Guilford Press.
- Leach, D., & Ralph, A. (1986). Home-school reinforcement: A case study. *Behaviour Change, 3*(1), 58-62.
- Martens, B. K., Witt, J. C., Elliott, S. N., & Darveaux, D. X. (1985). Teacher judgments concerning the acceptability of school-based interventions. *Professional Psychology: Research and Practice, 16*(2), 191-198.
- Mautone, J. A., Marshall, S. A., Sharman, J., Eiraldi, R. B., Jawad, A. F., & Power, T. J. (2012). Development of a family-school intervention for young children with attention deficit hyperactivity disorder. *School Psychology Review, 41*(4), 447-466.
- McCain, A. P., & Kelley, M. (1993). Managing the classroom behavior of an ADHD preschooler: The efficacy of a school-home note intervention. *Child & Family Behavior Therapy, 15*, 33-44.
- McCain, A. P., & Kelley, M. (1994). Improving classroom performance in underachieving preadolescents: The additive effects of response cost to a school-home note system. *Child & Family Behavior Therapy, 16*, 27-41.
- McGoey, K. E., Prodan, T., & Condit, N. (2007). Examining the effects of teacher and self-evaluation of disruptive behavior via school-home notes for two young children in kindergarten. *Journal of Early and Intensive Behavior Intervention, 3*, 365-376.
- The MTA Cooperative Group. (1999). A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder (ADHD). *Archives of General Psychiatry, 56*, 1073-1086.
- The MTA Cooperative Group. (2004). National institute of mental health multimodal treatment study of ADHD follow-up: Changes in effectiveness and growth after the end of treatment. *Pediatrics, 113*, 762-769.
- Murray, D. W., Rabiner, D., Schulte, A., & Newitt, K. (2008). Feasibility and integrity of a parent-teacher consultation intervention for ADHD students. *Child & Youth Care Forum, 37*, 111-126.
- O'Leary, K. D., Pelham, W. E., Rosenbaum, A., & Price, G. H. (1976). Behavioral treatment of hyperkinetic children. *Clinical Pediatrics, 15*, 510-515.
- Owens, J. S., Holdaway, A. S., Zoromski, A. K., Evans, S. W., Himawan, L. K., Girio-Herrera, E., . . . Murphy, C. E. (2012). Incremental benefits of a daily report card intervention over time for youth with disruptive behavior. *Behavior Therapy, 43*, 848-861.
- Owens, J. S., Murphy, C. E., Richerson, L., Girio, E. L., & Himawan, L. K. (2008). Science to practice in underserved communities: The effectiveness of school mental health programming. *Journal of Clinical Child & Adolescent Psychology, 37*, 434-447.
- Pelham, W. E., Jr., & Fabiano, G. A. (2008). Evidence-based psychosocial treatment for ADHD: An update. *Journal of Clinical Child & Adolescent Psychology, 37*, 184-214.
- Pelham, W. E., Jr., Fabiano, G. A., & Massetti, G. M. (2005). Evidence-based assessment of attention deficit hyperactivity disorder in children and adolescents. *Journal of Clinical Child & Adolescent Psychology, 34*, 449-476.
- Pelham, W. E., Jr., & Lang, A. R. (1993). Parental alcohol consumption and deviant child behavior: Laboratory studies of reciprocal effects. *Clinical Psychology Review, 13*, 763-784.

- Pelham, W. E., Jr., Wheeler, T., & Chronis, A. (1998). Empirically supported psychosocial treatments for attention deficit hyperactivity disorder. *Journal of Clinical Child Psychology, 27*, 190-205.
- Pingault, J. B., Tremblay, R. E., Vitaro, F., Carbonneau, R., Genolini, C., Falissard, B., . . . Côté, S. (2011). Childhood trajectories of inattention and hyperactivity and prediction of educational attainment in early adulthood: A 16-year longitudinal population-based study. *American Journal of Psychiatry, 168*, 1164-1170.
- Power, T. J., Mautone, J. A., Soffer, S. L., Clarke, A. T., Marshall, S. A., Sharman, J., . . . Jawad, A. F. (2012). A family-school intervention for children with ADHD: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 80*(4), 611-623.
- Raggi, V. L., & Chronis, A. M. (2006). Interventions to address the academic impairment of children and adolescents with ADHD. *Clinical Child & Family Psychology Review, 9*, 85-110. doi:10.1007/s10567-006-0006-0
- Rogers, M., Boggia, J., Ogg, J., & Volpe, R. (2015). The ecology of ADHD in the schools. *Current Developmental Disorders Reports, 2*(1), 23-29. doi:10.1007/s40474-015-0038-6
- Rogers, M. A., Wiener, J., Marton, I., & Tannock, R. (2009). Parental involvement in children's learning: Comparing parents of children with and without Attention-Deficit/Hyperactivity Disorder (ADHD). *Journal of School Psychology, 47*(3), 167-185.
- Smith, B. H., Waschbusch, D. A., Willoughby, M. T., & Evans, S. (2000). The efficacy, safety, and practicality of treatments for adolescents with attention-deficit/hyperactivity disorder (ADHD). *Clinical Child and Family Psychology Review, 3*, 243-267.
- Swanson, J. M., McBurnett, K., Christian, D. L., & Wigal, T. (1995). Stimulant medications and the treatment of children with ADHD. In T. H. Ollendick & J. Prinz (Eds.), *Advances in clinical child psychology* (vol. 17, pp. 265-322). New York, NY: Plenum Press.
- Vannest, K. J., Davis, J. L., Davis, C. R., Mason, B. A., & Burke, M. D. (2010). Effective intervention for behavior with a daily behavior report card: A meta-analysis. *School Psychology Review, 39*, 654-672.
- Villodas, M. T., McBurnett, K., Kaiser, N., Rooney, M., & Pfiffner, L. J. (2014). Additive effects of parent adherence on social and behavioral outcomes of a collaborative school-home behavioral intervention for ADHD. *Child Psychiatry & Human Development, 45*, 348-360.
- Volpe, R. J., DuPaul, G. J., DiPerna, J. C., Jitendra, A. K., Lutz, J. G., Tresco, K., & Junod, R. V. (2006). Attention-deficit/hyperactivity disorder and scholastic achievement: Models of mediation via academic enablers. *School Psychology Review, 35*, 47-61.
- Volpe, R. J., & Fabiano, G. A. (2013). *Daily behavior report cards: An evidence-based system of assessment and intervention*. New York, NY: Guilford Press.
- Vujnovic, R., Fabiano, G. A., Pariseau, M. E., & Naylor, J. (2013). Parameters of adherence to a yearlong daily report card intervention for students with attention-deficit/hyperactivity disorder. *Journal of Educational and Psychological Consultation, 23*, 140-163.
- Watabe, Y., Yuko, J. L., Stewart Owens, J. S., Andrews, N., & Griffeth, J. C. (2013). Effectiveness and sustainability of school-based interventions for youth with or at risk for ADHD. *School Mental Health, 5*(2), 83-95. 10.1007/s12310-012-9094-9
- Weiss, G., & Hechtman, L. (1993). *Hyperactive children grown up: ADHD in children, adolescents, and adults*. New York, NY: Guilford Press.
- Williams, K. L., Noell, G. H., Jones, B. A., & Gansle, K. A. (2012). Modifying students' classroom behaviors using an electronic daily behavior report card. *Child & Family Behavior Therapy, 34*, 269-289.

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