the ADHD REPORT

Russell A. Barkley & Associates

• Volume 26 • Number 1 • ISSN 1065-8025 • February 2018 •

Focus on the Side Effects of Psychosocial Treatments for Children and Teens with ADHD: A Special Issue

Russell A. Barkley, Ph.D.

INTRODUCTION

For the start of our 26th year of publishing *The ADHD Report*, I have elected to focus the first *two issues* on the profoundly important yet grossly underinvestigated topic of adverse events —or side effects—associated with the evidence-based forms of psychosocial treatment being used with children, teens, and adults with ADHD. A side effect is often considered to be "any effect of a drug, chemical, or other medicine that is in addition to its intended effect, especially an effect that is harmful or unpleasant"[1] or "a secondary and usually adverse effect (as of a drug)."[2] However, such effects are not limited to drugs but can be broadened to include any treatment or intervention, including psychosocial ones.

We know side effects or adverse events have to exist in conjunction with ADHD treatments, even if those psychosocial approaches are effective. Why? Because there is a long history of such negative effects being reported for psychological treatments in at least a subset of people undergoing such therapy. Nearly 50 years ago, books were being written on the negative effects of psychotherapy (Strupp, Hadley, & Gomex-Schwartz, 1977; Stuart, 1970) as were articles on the "casualties of encounter group therapies" (Yalom & Lieberman, 1971). By 1984, articles appeared on the deterioration associated with short-term inpatient psychotherapies (Beutler, Frank, Schieber, Calvert, & Gaines, 1984). And then there were the anxiety reactions induced by relaxation training (Heide & Borkovec, 1984). Within a decade or so, reviews of the literature on the adverse effects of psychotherapy were appearing (Mohr, 1995). More articles followed suit, including the work of Lynn and colleagues on potential adverse effects from hypnosis (Lynn, Martin, & Frauman, 1996); Dishion and colleagues on the occurrence of deviancy training from using therapy peer groups, as in social skills training with conduct problem youth (Dishion, McCord, & Poulin, 1999); Weiss and colleagues on

1. http://www.dictionary.com/browse/side-effect
2. https://www.merriam-webster.com/dictionary/side%20effect

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THE ADHD REPORT (ISSN 1065-8025) is published bimonthly by The Guilford Press, 370 Seventh Avenue, Suite 1200, New York, NY 10001-1020. Guilford's GST registration number: 137401014.
Subscription price: (eight issues) Individuals $105.00, Institutions, $470.00. Add $15.00 for Canada and Foreign (includes airmail postage). Orders by MasterCard, VISA, or American Express can be placed by Phone at 800-365-7006, Fax 212-966-6708, or E-mail news@guilford.com; in New York, 212-431-9800. Payment must be made in U.S. dollars through a U.S. bank. All prices quoted in U.S. dollars. Pro forma invoices issued upon request.
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Printed in the United States of America.

the iatrogenic effects of group treatment of antisocial youth (Weiss et al., 2005); and McCord's review on the adverse effects of crime prevention programs more generally (McCord, 2003). Subsequent research suggested that group composition might be one factor in determining such deviancy training effects (Mager, Milich, Harris, & Howard, 2005). Later articles documented deterioration in treatments for alcohol use disorder (Ilgen & Moos, 2005) and the iatrogenic effects of therapies for substance use disorders generally (Moos, 2005; Werch, & Owen, 2002).

More recently, Scott Lillienfield (2007) discussed findings related to both deterioration while in psychotherapy and the existence of generally hazardous psychological treatments. Though he focused much of his article on the identification of potentially hazardous forms of psychotherapy, his arguments also apply to identifying the side effects which might be associated with otherwise effective therapies. In 2010, David Barlow cogently argued that we cannot begin to understand the causes of the negative or iatrogenic effects of our psychological therapies—and thus learn how to reduce or avoid them—if we remain unwilling to at least acknowledge and study them. At the same time, Castonguay and colleagues (Castonguay, Boswell, Constantino, Goldfried, & Hill, 2010) discussed the training implications related to the growing awareness and monitoring of such side effects.

In 2012, Michael Linden went on to propose a model for the definition, classification, and assessment of side effects in psychotherapy, which he classified as unwanted events, treatment-emergent reactions, adverse treatment reactions, malpractice reactions, treatment nonresponse, deterioration of illness, therapeutic risks, and contraindications. He also set forth the *Unwanted Event to Adverse Treatment Reaction Checklist* to aid clinicians in their practice as well as researchers studying these phenomena. As he argued, the detection and assessment of side effects in psychotherapy is not a sign of bad but of good clinical practice. As psychosocial treatments moved to being provided via Internet-based therapy, reports of adverse events were appearing in that format as well, culminating in a consensus statement on defining and measuring the negative effects (Rozental et al., 2014).

As earlier writers have noted, adverse events must occur—if only because of the substantial variability in:

- *Client variables, such as the psychological composition of individuals*, not to mention the existence of comorbidities that may alter the manner cases react to an intervention;
- *Therapy variables, such as the nature of the technique being used as well as the unique interpretation of clients to such environmental manipulations*, or how they actively contemplate and evaluate the nature and intentions of the treatment or therapist;
- *Therapist variables, such as the variability of clinical training and competence among practitioners* in teaching or personally implementing these psychosocial methods with caregivers and clients; and
- *Cultural variables, including the cultural context in which these methods must be implemented by their recipients (and professional colleagues)* (e.g., just try teaching spanking now as a therapeutic back-up to time-out violations by a child—a procedure that was routine 20+ years ago).

Yet, judging from the scientific papers on psychosocial treatments, side effects are almost never mentioned even with longstanding reports of these effects. Many working in the field of ADHD psychosocial treatment can turn a blind eye to the existence of adverse effects, as if such treatments, even if ineffective, are completely benign.

As the articles in this special issue will attest, our unwillingness to study the side effects of our psychological treatments is troubling. While it is extremely rare for clinical scientists to report any adverse events in their articles on psychosocial treatments for ADHD, much less to have assessed them in any

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systematic or standardized way, they do exist. That is why I have devoted two special issues to this topic.

The examination of such side effects is not a task one can tackle alone. I have invited a panel of experts with well-recognized expertise in their specialized areas of ADHD intervention to address the side effects that may arise in conducting psychosocial treatment. I am truly grateful for their assisting me with this endeavor. They have prepared what I believe are groundbreaking articles on this topic—a topic that is in desperate need of investigation.

The evidence base for the various side effects that may be associated with ADHD medications is substantial and generally well known. Indeed, many scientific papers and reviews of the literature on psychosocial treatments for ADHD often begin by focusing on those drug side effects as a justification for undertaking the study or review.

Yet, we should recognize this all-too-common rationale for what it really is—a straw man. The unquestioned premise here is that drugs are bad (because of their side effects) and psychosocial treatments are uniformly good (because they don't produce such effects). The implication is not hypothetical. In 2016, the Centers for Disease Control (CDC) held a press conference during which they decried the increased use of medications to manage preschoolers with ADHD while chastising practitioners for not employing behavioral parent training (BPT) in more cases as a first line treatment before considering the medication option (Canady, 2016). During that conference and in its coordinated press release and published interviews, CDC representatives went so far as to claim that BPT for preschoolers with ADHD was as effective as medication *and produced no side effects!* Neither of those claims can be supported by the existing scientific or clinical literature on BPT when used with ADHD (Barkley, 2016a, 2016b; van der Veen-Mulders, van den Hoofdakker, Nauta, Emmelkamp, & Hoekstra, 2017).

Those of us who have studied psychosocial interventions for ADHD know full well that they do produce adverse events in a subset of cases enrolled in our treatment trials. The problem is that only a few studies note that some patients get worse from intervention. And almost none of the studies routinely employ methods or measures to assess side effects and report them at the individual level of analysis, perhaps using reliable change statistics to examine what proportion improved, remain unchanged, or worsened during treatment. Moreover, patients may improve on the primary endpoint measure (e.g., reduction of ADHD symptom ratings) yet develop adverse reactions that are not being reflected in such ratings. Just as with research on ADHD medications that routinely report such results in detail, those studying psychosocial treatments need to give a forthright and more complete accounting of our psychosocial treatments. Researchers need to take steps to systematically examine and report the occurrence of adverse events as well as symptom deterioration as routine criteria in the publication process if we expect psychosocial treatments to be accepted with the same degree of transparency and confidence as the results of medication trials.

This first special issue on side effects concentrates on four of the commonly studied treatments for child and adolescent ADHD: (1) parent training in behavior management skills; (2) teacher training in classroom behavior management skills; (3) social skills training; and (4) training teenagers with ADHD (along with their parents) in behavioral organizational and time management skills related to homework. The second issue of this year will focus on the side effects of interventions for teens and adults with ADHD. Those therapies include: training parents and teens in problem-solving/communication skills to address parent-teen conflict; cognitive behavioral therapy targeted at ADHD and usually its executive function deficits; ADHD coaching, particularly for college students; and mindfulness meditation training.

It is my hope, as well as that of the contributing authors, that these articles will spur greater efforts to identify and routinely assess the side effects that may be associated with each form of psychosocial treatment. Perhaps, as is now the case with ADHD medications, a day will soon arrive when studies of psychosocial treatments will not be funded by granting agencies, much less accepted for journal publication, unless they contain the results of analyses designed to examine for possible deterioration due to treatment as well as other adverse effects. And, hopefully, that these articles will push for a more open discussion of the risk/benefit considerations in ADHD treatment implementation in clinical practice.

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Adverse Events in Behavioral Parent Training for Children with ADHD: An Under-Appreciated Phenomenon

Carla Allan, Ph.D., and Anil Chacko, Ph.D.

Behavioral parent training (BPT) has long been recommended in clinical practice guidelines as a frontline treatment for attention-deficit/hyperactivity disorder (ADHD) and disruptive behavior disorders (American Academy of Pediatrics, 2011). BPT has earned frontline status due to its demonstrated effectiveness and its relative lack of known adverse events (AEs) compared to other well-established treatments for ADHD, such as medication, which has been associated with appetite suppression and increased emotionality, among other documented side effects (Charach, Ickowicz, & Schachar, 2004). While it is generally accepted that BPT has very few AEs, there is very little formal research to support this conclusion—as such, comparison between BPT and medication on the basis of AEs is largely conjecture rather than data driven. Although it is not well researched, the notion that BPT could have AEs is not new. A single subject, multiple baseline study by Herbert and colleagues in 1973 evaluated the effect of teaching parents differential attention on child disruptive behavior and found that 4 of the 6 children exhibited significant and lasting increases in new problem behaviors, including aggression and self-injurious behavior, leading the authors to conclude that more rigorous studies of AEs were needed over 40 years ago. Herein, we will discuss the literature regarding AEs of BPT and common experiences from our own clinical practice. Whenever possible, we will provide practical recommendations for practice as well as guidance for future research endeavors.

Adverse Effects in Psychosocial Research

Prior to reviewing what is known about side effects in BPT, let us review the history of evaluating AEs in psychosocial research generally. Duggan and colleagues (2014) describe a history in which adverse events were not considered relevant for studies of psychosocial interventions, perhaps because "talk therapy" was historically viewed as less effective (and therefore less risky) relative to medical treatments, which have long been required to measure and report adverse events during the course of randomized controlled trials (RCTs)

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