

Treatment Integrity and Differential Treatment Effects

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Bhar and Beck (2009) examined the extent to which treatment integrity procedures were implemented in studies comparing psychoanalytic psychotherapies and cognitive-behavioral therapies. Consistent with other reports on attention to treatment integrity in psychotherapy research, the authors noted that most of the evaluated studies did not adequately implement treatment integrity procedures. This highlights methodological neglect of treatment integrity and a need to amend errors in monitoring the independent variables under investigation. This commentary considers how Bhar and Beck's investigation affects the dodo bird verdict that all psychotherapies are presumed to be of equal efficacy. Further, ways to examine the treatment integrity of process-oriented treatments (e.g., humanistic, psychoanalytic) are discussed.

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Treatment integrity is integral to treatment outcome research methods, especially in conducting randomized controlled trials (RCT), where precision and clarity are imperative (Kendall & Comer, in press). In order to draw valid inferences regarding the relationship between an intervention and the obtained results, it is necessary to establish and document that treatment was conducted as intended. Further, monitoring treatment integrity allows judgments as to whether treatments under investigation differ from each other along critical dimensions. Indeed, treatments may produce similar outcomes because they incorporated each other's components and are no longer distinct. The question on how inadequate attention to treatment integrity may hinder attempts to examine differential treatment effects has been highlighted by Bhar and Beck (2009). Their evaluation focused on the degree to which integrity was addressed in treatment outcome studies.

TREATMENT INTEGRITY AND THE DODO BIRD VERDICT

Failure to monitor treatment integrity may actually contribute to the dodo bird conjecture, which speculates that therapies demonstrate equal efficacy (Wampold et al., 1997). Bhar and Beck approached the question of the dodo bird verdict by examining the degree to which treatment integrity was addressed in the studies comparing short-term psychoanalytic psychotherapies and cognitive-behavioral therapies. A recent meta-analysis (Leichsenring, Rabung, & Leibing, 2004) suggested that these therapies were comparable across the range of psychiatric disorders. Yet, treatment integrity was not considered in this examination. Indeed, as demonstrated by Bhar and Beck, most of the evaluated studies did not adequately address

treatment integrity. Furthermore, most of the examined studies did not assess treatment differentiation. These results seriously question the dodo bird conjecture.

The dodo bird verdict is often used by proponents of the common factor approach to support efforts to abandon the empirical examination of psychotherapies, and adapting a contextual approach, which emphasizes common factors (e.g., alliance, therapist allegiance to a therapeutic approach; e.g., Wampold, 2001). Wampold (2001) acknowledged that the dodo bird effect may stem from inadequate attention to treatment integrity, as it jeopardizes treatment differentiation. In response to this acknowledgment, he evaluated whether differences in treatment outcomes were related to the date of publication, assuming that research methods (including treatment integrity) advance as a function of time. He found no evidence to support this relationship (Wampold et al., 1997). However, his evidence rested on a presumption that attention to treatment integrity increased over time. To my knowledge, there is no empirical support for this assumption. On the contrary, Peterson, Homer, and Wonderlich (1982) demonstrated that attention to treatment integrity did not seem to increase. Analysis of the data, for the purposes of this article, from a treatment integrity in psychotherapy research project (Perepletchikova, Treat, & Kazdin, 2007) also revealed no changes in attention to treatment integrity over time in RCTs published between 2000 and 2004, $t(142) = -0.12, ns$.¹ Even if there were an increase in attention to treatment integrity, the implemented procedures were inadequate in more than 96% of the examined RCTs (Perepletchikova et al., 2007). More attention in the face of inadequate implementation does not constitute a methodological improvement.

TREATMENT INTEGRITY AND PROCESS-ORIENTED THERAPIES

As underscored by Bhar and Beck (2009), failure to implement treatment integrity procedures limits interpretability of the obtained results. Yet, the degree to which each treatment integrity procedure is implemented may be dictated by the nature of an intervention. Some interventions, particularly process-oriented treatments, do not permit strict manualization of tasks and activities (e.g., humanistic, existential, psychodynamic). Lack of a specific manual may hinder attempts to establish and assess treatment integrity. For example, training

in a humanistic therapy involves providing therapists with an understanding of humanistic philosophy and the theoretical basis of an intervention, and facilitating the development of creativity, empathy, and genuineness. Such training entails idiosyncratic responding within the boundaries of certain fundamental principles, while specific prescriptions of how to conduct therapy are not offered. Although idiosyncratic responding of therapists is permitted in clinical practice, empirical evaluation of intervention efficacy necessitates uniformity in therapists' behavior. When the performance of treatment agents varies widely, unsystematic and random variation is introduced into the delivery of a treatment, compromising the experimental validity of a study and reducing statistical power.

Suggestions on how to validate approaches that are resistant to empirical testing with current research methods (e.g., those that cannot be sufficiently manualized) have been offered. For example, Bohart, O'Hara, and Leitner (1998) proposed measuring adherence to the general principles and philosophy of an approach, rather than to specific techniques. The authors recommended using both client and expert ratings in measuring the extent to which therapeutic process corresponded to the principles of a therapy. However, before such recommendations can be implemented, it is important to consider how to define, assess, and report theoretical integrity, how to train clinicians to minimize variability using vague guidelines, and how to quantify adherence to general principles.

Other proposed approaches to testing the efficacy of process-oriented treatments include utilization of dismantling and constructive designs (Borkovec & Castonguay, 1998). Dismantling strategies allow analysis of individual components of an intervention. Instead of testing the efficacy of a treatment as a package of components, dismantling research identifies the necessary or sufficient elements by isolating them. This type of research may be particularly suited to the evaluation of process-oriented psychotherapies because it simplifies these rather complex interventions by narrowing the focus to specific aspects or procedures. For example, using dismantling strategies, one can evaluate whether expressive techniques (e.g., analysis of transference and countertransference) contribute to the therapeutic effect above and beyond the uncovering (e.g., interpretations)

of supportive facets of a psychoanalytic treatment. However, isolating and examining specific ingredients may not solve the problem of the need to control the independent variable if components are not operationally defined.

Constructive strategies are used to evaluate whether adding components to a treatment package enhances effects of an intervention. The broad scope of psychological impairments, the clients' personality, contextual influences, and other associated factors require complex interventions. When using constructive research, the components of a process-oriented therapy may be gradually incorporated into a complete treatment package. However, due to the largely theoretical nature of process-oriented therapies, each additional ingredient may greatly complicate the therapeutic process, rendering quantification of the independent variable unmanageable; thus, this strategy may challenge the feasibility of empirical testing.

The outlined suggestions may, to some degree, encourage and facilitate examination of the efficacy of process-oriented therapies. However, such recommendations may be just an attempt to squeeze challenging treatments through the narrow boundaries of the established methods. Much has to be considered before such approaches can be utilized, including manualization concerns, uniformity in treatment delivery, and quantification of theoretical integrity. Alternative validation procedures may have to be established. Before such procedures are sufficiently elaborated to warrant their utilization for examining therapeutic efficacy, current methods have to be used, and as Bhar and Beck's (2009) research suggests, psychotherapy outcome research needs to amend errors in addressing treatment integrity.

The issue of empirical evaluation of research-resistant interventions may be particularly salient at this time, due to the development of second-generation treatment approaches. Second-generation treatments rely more heavily on principles of change than on the intervention as a package of components (e.g., prescribed tasks per session; Calhoun, Moras, Pilkonis, & Rehm, 1998; Davison, 1998; Rosen & Davison, 2003). The proponents of this movement argue that empirically based treatments primarily consist of cookbook methods marketed for treatment of specific *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.)

categories and can be recognized without demonstrating any specific mechanisms of change. Instead of utilizing trademarked interventions and testing treatment packages, psychotherapy research should identify empirically supported principles of change and evaluate the range of their application.

The psychological principles that underlie clinical improvement may be theory or concept driven rather than technique or skill based (e.g., Calhoun et al., 1998). Identification of these principles of change may be laden with problems similar to those that plague the empirical evaluation of process-oriented therapies. Therefore, it may be imperative to address the issue of empirically testing complex, theory-based approaches more systematically.

Whether treatments are evaluated as a package or via the identification of specific principles underlying therapeutic effect, treatment integrity plays an integral role. Unambiguous interpretation of the achieved outcome may be impossible without demonstrating integrity of the independent variable under consideration. Adequate attention to treatment integrity may indeed contribute to our understanding of the therapeutic process and the mechanisms of change. Careful assessment of the implementation of different treatment components may help identify ingredients that are conducive to change and those that are merely auxiliary.

Understanding of the specific and nonspecific factors that underlie therapeutic effectiveness may also simplify the transition of empirically based treatments from research laboratories to clinical settings (e.g., Jensen, Hoagwood, & Trickett, 1999; Jensen, Weersing, Hoagwood, & Goldman, 2005; Weisz, Weiss, & Donenberg, 1992). Once active ingredients of change are known, adherence to specific treatment manuals may not be needed in clinical practice. In applied settings, adherence to a protocol may be necessary when treatment is defined by all of its representative components, many of which are nonspecific. When active ingredients are separated from nonspecific factors, treatment may become more precise and, therefore, intervention delivery may be simplified. If research demonstrates that most therapeutic change is indeed attributable to the nonspecific factors (e.g., attention, alliance, motivation, hope), adherence to specific treatment procedures may also become unnecessary.

Therapists will just be encouraged to focus on maximizing these aspects during the therapeutic process. However, in order to examine mechanisms of change, including mediating, moderating, and causal variables, treatment integrity procedures must be employed.

Although constructive criticism of the methods used in the medical model (e.g., RCTs) is welcome and needed to make necessary adjustments, alternative procedures (e.g., more naturalistic designs) have been only barely outlined (e.g., Bohart et al., 1998; Westen, Novotny, & Thompson-Brenner, 2004). Until they are sufficiently developed and refined to allow adequate implementation for evaluating treatment efficacy, current methods have to be employed, and assuring treatment integrity is vital.

Bhar and Beck (2009) have provided a valued comment on the issues of treatment integrity and differential treatment effects. It is hoped that their work will instill further appreciation of treatment integrity and promote amendments to the continually demonstrated methodological neglect of the independent variables under consideration. The double standard in addressing experimental variables, where dependent variables (measures of outcome) are operationally defined, assessed, and evaluated, while the independent variables (treatments under examination) are largely ignored, has to be corrected.

NOTE

1. Analyses were performed using Hierarchical Linear Modeling (HLM; Bryk & Raudenbush, 1992) (HLM 6.01 software; Scientific Software International, Inc., 2005).

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