DOI: 10.1002/ppi.1424

WILEY

REVIEW

Improving knowledge about the effectiveness of psychotherapy

Ian N. Donald[1] | **Timothy A. Carey**[2]

[1] University of Canberra, Canberra, Australia

[2] Centre for Remote Health, Flinders University, Alice Springs, Australia

Correspondence
Prof. Timothy A. Carey, Centre for Remote Health, PO Box 4066, Alice Springs, NT 0871.
Email: tim.carey@flinders.edu.au

Abstract

Quantitative methods and methodologies have dominated research on the efficacy and effectiveness of psychotherapy. The value of the quantitative paradigm is reflected in the criteria used to establish empirically supported treatments. However, quantitative research, including randomised control trials (RCTs), may not be ideally suited to establishing the effectiveness of the complex process of psychotherapy. The process and outcomes of psychotherapy have been regarded as causally entangled; the client's and therapist's efforts to responsively regulate the therapeutic process should be seen as being integral to outcomes rather than a source of confounding variance. Qualitative research may provide additional insights into the process of how psychotherapy is effective, due to its ability to explore phenomena from multiple perspectives. This is particularly important as research has suggested that qualitative differences in treatments can be masked beneath quantitatively equivalent outcomes. As a result, a continued overreliance on quantitative research may limit the discipline's overall ability to account for and differentiate the effectiveness of psychotherapies. This article proposes that, in order to address this limitation, (i) the criteria for how psychotherapies are considered effective should be expanded to include factors such as the efficiency of treatments, rates of change, and reliability of change; (ii) and that qualitative research be used adjunctively to assess and explore the dimensions of the expanded criteria. The development of a methodologically integrative multidimensional assessment of treatment effectiveness will provide a more informative tool to guide clinical decision making and policy.

KEYWORDS

psychotherapy, effectiveness, efficacy, RCT

1 | INTRODUCTION

The efficacy and effectiveness of many bona-fide psychotherapies has been well established (Grissom, 1996; Lipsey & Wilson, 1993), leading to the identification of empirically supported treatments (Chambless & Hollon, 1998),

evidence-based treatments, and empirically validated treatments (Levant & Hasan, 2008). Such approved "ethical" treatments are more likely to become the focus of recommendation, endorsement, funding support, and availability in training programs (Babione, 2010; Department of Health, 2011; Henry, 1998). Currently, the discipline has established efficacy and effectiveness primarily from the perspective of pre–post therapy changes. While it is clearly important to establish the effectiveness of any psychotherapy, the use of such a narrow conceptualisation may limit the discipline's ability to comprehensively evaluate the impact of psychotherapy. However, to consider the ways in which understanding of the discipline may be limited by a narrow conceptualisation of efficacy and effectiveness, it is necessary to first consider the origins and limitations of how efficacy and effectiveness have been studied.

2 | A HIERARCHY OF RESEARCH EVIDENCE

Internationally, different criteria have been used to demarcate when a psychotherapy qualifies as an evidence-based treatment (Kazdin, 2011). The Australian Psychological Society (APS, 2010) used guidelines developed by the National Health and Medical Research Council (NHMRC) to inform their own evaluations of the efficacy of psychotherapies. According to the APS (2010) guidelines, meta-analysis is the most powerful method of establishing the efficacy of a psychotherapy, but must be carefully designed and based on a well-developed literature (Field, 2013; Green, 2012). According to these guidelines, the next highest level of evidence comes from at least one properly designed randomised control trial (RCT). RCTs are invaluable in establishing the efficacy of treatments as they delineate the outcomes of psychotherapy by controlling for the influence of factors such as participant's age, gender, and the placebo effect (Dyer & Joseph, 2006; Hollon & Wampold, 2009). RCT designs are also used in effectiveness studies and seek to increase the external validity of findings by studying outcomes in naturalistic settings with fewer sampling restrictions. Compared to efficacy studies, however, the design of effectiveness studies results in a loss of internal validity for delineating treatment effects (Hunsley, 2007).

The third level of supporting evidence includes a range of non-RCT comparative studies and pseudo-RCTs, while the lowest tier of evidence is reserved for case series designs without control groups. This hierarchy explicitly communicates the view that non-RCT designs provide less powerful evidence of efficacy than RCTs (Dyer & Joseph, 2006). The enthusiasm with which RCTs have been utilised in outcome research (Cooper & Reeves, 2012) has led some to suggest that "RCT methodology has metamorphosed into EST [empirically supported treatments] methodology" (Westen, Novotny, & Thompson-Brenner, 2004, p. 638). The widespread and at times uncritical adoption of RCTs to demonstrate treatment effectiveness neglects the view that the value of any methodology is determined by its ability to explore the phenomenon and address the research question (Jadad & Enkin, 2007). From this perspective, the ideas of a "hierarchy of evidence" and a "gold standard" methodology are fundamentally flawed. The gold standard is matching an important research question with an appropriate methodology not the widespread application of one methodology at the expense of all others.

3 | LIMITED PROGRESS IN DIFFERENTIATING TREATMENT EFFECTIVENESS

Interestingly, despite extensive research comparing the efficacy and effectiveness of various psychotherapies, few consistent differences in outcomes have been noted (Luborsky et al., 2002; Wampold, 2001). This finding, known as the equivalence paradox (Luborsky et al., 2002), has led to the common and specific factors debates (Crits-Christoph, 1997; Howard, Krause, Saunders, & Kopta, 1997; Luborsky et al., 2002; Wampold, Mondin, Moody, & Ahn, 1997), with some asserting that the finding is a premature overgeneralisation. It has been noted that the equivalence paradox has only been studied predominately in adult samples—in a small subset of treatments—that have been diagnostically reductive by treating subtypes of disorders as the same (Barber, 2009; Budd & Hughes, 2009; Chambless, 2006). Interestingly, Stiles (2009b, 2013) opined that the equivalence paradox may in fact be the result

of clients' and therapists' efforts to responsively regulate treatment factors, causing correlational data to appear weak and inconsistent. Together, these findings describe how the discipline has been unable to unify researchers' views as to whether psychotherapies differ in their effects, or explain how such effects are produced. At the beginning of this century Kazdin (2001) noted that the discipline had "no clear understanding of therapeutic change, no clear set of studies that advance our understanding of why treatment works, and scores of outcome studies that are at the same time wonderfully but also crassly empirical" (p. 59). Of concern, 10 years later Kazdin (2011) continued to report that there was still "little in the way of evidence-based explanations of treatment effects" (p. 693).

3.1 | Moving towards evidence-based principles of change

Considering the equivalence paradox and lack of knowledge about how treatments may differ, it has been suggested that the continued diversification of therapies without exploring the underlying principles and/or mechanisms of therapeutic change would reflect the hegemony of the medical model of psychopathology and researchers' allegiances to brands of therapy, rather than an adherence to the accumulated data (Budd & Hughes, 2009; Rosen & Davison, 2003; Rounsaville & Carroll, 2002). Rosen and Davison (2003) argued that, in order to avoid the proliferation of "evidence-based" brand-name therapies with little to no empirical literature to support the use of their specific techniques or underlying theories of change, specific components of therapy should be embedded within a plausible conceptual framework and relate to established principles of change.

Compared to the interminable scope of conducting an endless series of RCTs in order to test every possibly effective component of each therapy, it has been proposed that understanding the principles and mechanisms of change would be a more productive avenue for researchers (Carey, 2011; Kazdin, 2008b; Rosen & Davison, 2003; Tryon, 2005). The goal of developing evidence-based principles or empirically supported principles is to develop guidelines for therapists to understand what is helpful in psychotherapy across approaches (Castonguay & Beutler, 2006; Oddli, Nissen-Lie, & Halvorsen, 2016). In this way, principles of change are situated between specific therapeutic techniques and approach-based theories of change (Goldfried, 1980, cited in Goldfried & Davila, 2005).

Alternatively, studies of mechanisms of change seek to understand the change process through the study of moderators, mediators, or computational models that utilise feedback loops (Kazdin, 2011; Tryon, 2009, 2012). To date, Kazdin and Nock (2003) have proposed criteria for demonstrating causal mechanisms of change in psychotherapy research. Connectionist models have also been developed to explain the biopsychosocial model and the process of exposure in psychotherapy (Carey, 2011; Carey, Mansell, & Tai, 2014; Tryon, 2005, 2012; Tryon & Misurell, 2008).

Stiles (2007, 2009a) has proposed that another avenue to advance knowledge about psychotherapy is to develop a program of theory-building case-study-based research. Research such as this may be particularly valuable by allowing for the underlying theories of change to be explored while accounting for the complexity of the process of psychotherapy. It has also been suggested that case-study-based research, single-case experimental designs, and process-outcome studies may be useful in understanding the process and principles of therapeutic change and advancing evidence-based practice (APA Presidential Task Force on Evidence-Based Practice, 2006; Edwards, Dattilio, & Bromley, 2004).

3.2 | Causal entanglement and agency

Although the study of principles and mechanisms of change is a promising avenue for research, it has been suggested that progress may be limited by the unsuitability of some quantitative methodologies to the study of the complex process of psychotherapy. Counter to the causal assumptions of the RCT methodology (Jadad & Enkin, 2007), several researchers have suggested that the process and outcomes of psychotherapy are causally entangled and influence one another (Budd & Hughes, 2009; Krause & Lutz, 2009). It has been noted that despite efforts to standardise the influence of various factors through treatment manualisation, clients and therapists find ways to vary their interactions to produce optimal outcomes (Budd & Hughes, 2009; Krause & Lutz, 2009). Additionally, the process of

randomising participants to treatment conditions has minimised the importance of client's informed decision making about selecting treatments and therapists that suit them (Budd & Hughes, 2009; Stiles, Barkham, Connell, & Mellor-Clark, 2008). It is curious to consider that, despite recognition that clients and therapists responsively regulate their interactions to produce optimal treatment outcomes, the discipline has continued to overrely on quantitative methods and methodologies whose assumptions contradict this fundamental knowledge about the nature of psychotherapy.

4 | QUALITATIVE RESEARCH TO EXTEND KNOWLEDGE ABOUT PSYCHOTHERAPY EFFECTIVENESS

While the quantitative paradigm has been integral in establishing treatment efficacy and effectiveness, researchers have increasingly become interested in using qualitative methodologies to extend knowledge about the process of psychotherapy (Salmon, 2013; Silverstein, Auerbach, & Levant, 2006; Yoshikawa, Weisner, Kalil, & Way, 2013). It has been suggested that qualitative research is well suited to the study of psychotherapy as it is concerned with exploring questions such as "how," "why," and "what" from multiple perspectives, such as those of client, therapist, observer (Nelson & Quintana, 2005).

While qualitative methodologies have notable advantages for the study of psychotherapy, they are not without limitations. Qualitative research aims to produce findings that are transferable, rather than generalisable, and so must be evaluated for goodness-of-fit to other samples (Silverstein et al., 2006; Thomas & Magilvy, 2011). However, with the development of qualitative meta-analysis (Timulak, 2009) and metasynthesis (Iwakabe & Gazzola, 2009) it is possible to more robustly evaluate and summarise findings from multiple studies. The use of small sample sizes in qualitative research has previously been criticised for a lack of reliability and validity (Silverstein et al., 2006) although this could be considered as a conflation of the goals of quantitative methods with the purposes of qualitative approaches. Moreover, it has been noted that in some qualitative approaches (particularly those with a nomothetic focus) small sample sizes are used to limit the amount of analysable data once theoretical saturation has been achieved (Guest, Bunce, & Johnson, 2006; Walker, 2012). As statistical power is an inappropriate metric to assess the value of qualitative findings, extensive recommendations and guidelines have been developed to assist readers in evaluating the quality and integrity of qualitative research (see Malterud, 2001; Morrow, 2005, 2007; Rennie, 2012; Yardley, 2000).

Qualitative research could help advance an understanding of effective psychotherapy in several ways. Studies could delineate what clients and therapists perceive as being effective both during therapy and post-therapy, to help inform the development of ways to track, measure, and evaluate therapeutic effectiveness. Additionally, studies could compare themes from good- and poor-outcome cases (e.g., McElvaney & Timulak, 2013) in effective psychotherapies in order to understand what factors may help to improve outcomes. More broadly, however, qualitative research could be of value in understanding what makes a psychotherapy effective and how to best evaluate it.

5 | BROADENING THE ASSESSMENT OF EFFECTIVENESS

Considering the flexibility and range of questions that qualitative research can explore, the discipline may benefit by expanding its current criterion of effectiveness. With qualitative research, it is possible to consider effectiveness from multiple positions. How and from whose perspective therapeutic changes are defined and measured is central to the way in which outcomes and thereby effectiveness are established. In the absence of a single definition of therapeutic change (Roussos, 2013), numerous conceptualisations have been offered including movement in personality structure (Blatt & Ford, 1994), pre–post symptom changes (Buitelaar, Wilens, Zhang, Ning, & Feldman, 2009; Kazdin, 2008a), as well as functionality, quality of life, and subjective wellbeing (Buitelaar et al., 2009; Greer, Kurian, & Trivedi, 2010). While effect sizes, clinical change, or reliable change (Atkins, Bedics, McGlinchey, & Beauchaine, 2005; Jacobson &

Truax, 1991) are valuable indicators of effectiveness, as currently applied in effectiveness research, they are typically constrained to one dimension: pre- to post-symptom change.

Rather than assessing one dimension of change and thereby effectiveness, it may be more valuable to triangulate multiple domains of change (e.g., symptom change, functioning, well-being) and perspectives (e.g., client, therapist, observer, measures) using both qualitative and quantitative research (Anderson & Cuijpers, 2009; Kazdin, 2014). An integrative knowledge of change across multiple domains is relevant for three main reasons. First, clients' assessments of how and when change has occurred can differ from the view of therapists' or assessments by measures (Kazdin, 1999; Reese, Toland, & Hopkins, 2011). Second, there is continued debate about whether global and symptom-based measures are sufficient to assess recovery (John, Jeffries, Acuna-Rivera, Warren, & Simonds, 2015; Levitt, Butler, & Hill, 2006). Third, qualitative differences can be masked beneath quantitatively equivalent outcome findings (Klein & Elliott, 2006; Nilsson, Svensson, Sandell, & Clinton, 2007).

A broader view of change and effectiveness may also help account for cases where the client's goals are to cope with unremitting symptoms, or his or her problems may not otherwise fit easily within a medicalised, diagnostic, or symptom-faced conceptualisation of change (Kazdin, 1999). As clients are the site of change (Bohart, 2000; Greenberg, 1991), their perspectives should be integral to the assessment of effectiveness, especially considering that they do not typically use indicators of clinical or reliable change when deciding to end therapy, and instead make decisions based on their goals and ability to reach a good enough level of recovery (Barkham et al., 2006; Kazdin, 1999).

It is argued that, while effectiveness should continue to be partially defined by quantitative measures of change (using the existing criterion), it could be extended in a number of directions. Ellis (1980) proposed criteria such as the brevity, depth-centredness, pervasiveness, extensiveness, and thoroughgoingness of psychotherapy. He also noted that the ability of treatment to maintain gains and be preventive were also important criteria to consider. We similarly propose that a psychotherapy's effectiveness should be informed not only by statistical indicators of the magnitude of change, but also the efficiency of the treatment, rates of change, and reliability of outcomes. Furthermore, these dimensions can be understood and evaluated using both quantitative and qualitative indicators (see Figure 1).

5.1 | Efficiency

While the effectiveness of psychotherapy has been extensively investigated, comparatively little attention has been devoted to considering how efficient therapies are at facilitating change (Ellis, 1980). Efficiency of treatment is particularly salient due to its economic implications. If treatments are, in fact, equivalent in outcomes, then the treatment that produces the most change in the least sessions is preferable both financially and ethically as it will quickly ameliorate the client's problematic experiences.

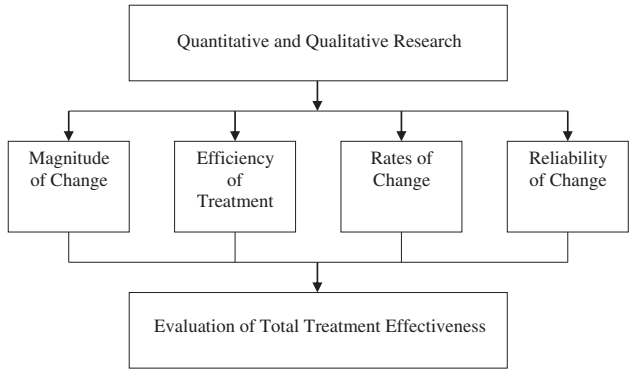

FIGURE 1 Components of total treatment effectiveness

Carey, Tai, and Stiles (2013) suggested that treatment efficiency could be assessed by considering the ratio of treatment effect size to mean number of sessions. Ratios closer to 1 represented more efficient treatments, while numbers closer to 0 represented less efficient treatments. Considering that these basic data are easily collectable, it should be possible to develop benchmarks for efficiency across different treatment approaches. Additionally, developing multiple efficiency indices for types of change (e.g., functional, symptomatic) per therapy could help clinicians select a therapy that is efficient for resolving particular types of issues on an idiographic basis.

5.2 | Rates of change

According to the dose-effect model, client change follows a path of negatively accelerating improvement as treatment length increases (Howard, Kopta, Krause, & Orlinsky, 1986; Kadera, Lambert, & Andrews, 1996). This model has, however, been called into question. Some evidence suggests this may not be the case for adolescents in mental health services (Bickman, Andrade, & Lambert, 2002; Salzer, Bickman, & Lambert, 1999), and individual dose-effect patterns and rates of such change have been found to vary (Owen, Adelson, Budge, Kopta, & Reese, 2016; Stulz, Lutz, Kopta, Minami, & Saunders, 2013). Additionally, Tang, Luborsky, and Andrusyna (2002) noted that different psychotherapies may vary in their rates of sudden gains and reversals. Furthermore, Gaynor et al. (2003) found that 85% of sudden gains for adolescents occurred prior to session five, while in a sample of adults only half experienced sudden gains by the same session (cf. Tang et al., 2002).

As there appears to be some suggestion that there could be differences in rates of sudden changes for different therapies and samples, it may be important to consider such factors in assessing rates of change in different samples or problems. According to this criterion, a more broadly effective psychotherapy would be one that has a greater proportion of sudden gains in fewer sessions, with fewer reversals. Indexing the rates and proportion of sudden gains and reversals for different treatments, problems, and samples, would aid in treatment decision making when access to sessions is limited.

5.3 | Reliability of change

While psychotherapy is effective in producing changes, many clients experience "relapses" of symptoms post-treatment. It is important, therefore, to understand which factors improve the client's ability to maintain changes post-therapy. From a client-centred viewpoint, the causes of relapse are multidetermined and can be perhaps more helpfully constructed as problems in living rather than as psychopathology (Bohart, 2017). Qualitative research could be particularly valuable in exploring how gains are successfully maintained post-therapy. Such knowledge could be considered in relation to improving therapy processes that enhance possible "relapse prevention" strategies.

While statistical procedures have been developed to assess the reliability and clinical significance of changes (Atkins et al., 2005; Jacobson & Truax, 1991), it is unclear how these changes map onto the lived experiences of clients and whether they actually predict the maintenance of changes post-therapy. Considering that clients determine when to end therapy according to a good-enough level of change (Stiles, 2009b, 2013), it would also be helpful to understand how clients' qualitative themes in this regard fit with quantitative indicators.

6 | CONCLUSION

The current limited criterion used to evaluate the efficacy and effectiveness of psychotherapy represents a missed opportunity to advance the discipline's knowledge about *how*, for *whom* and in *what* ways psychotherapy is effective. By extending the criteria to include the magnitude, efficiency, rates, and reliability of change, it will be possible to more meaningfully index in what ways psychotherapies help people to produce the changes they seek. While quantitative research remains invaluable in establishing the efficacy and effectiveness of psychotherapy using these

expanded criteria, a phenomenologically richer understanding may be developed by also considering the qualitative dimensions of effectiveness.

By expanding the criteria and methods used to assess total effectiveness, it would be possible to present this information in a standardised manner to aid in the comparison of therapies across various domains (e.g., symptom, functioning, personality change). This information could be complemented by the presentation of qualitative information drawn from meta-synthesis or qualitative meta-analysis which illustrates what clients identify as therapeutic changes. Historically, the view of the client has been comparatively neglected in theory and symptom-based paradigms of outcomes, efficacy, and effectiveness. By triangulating outcomes from multiple perspectives, measures, and methodologies, it may be possible to improve therapists' ability to determine which treatment is best for the client and their problem(s) in the context of available treatment options (APA Presidential Task Force on Evidence-Based Practice, 2006).

Improving the discipline's ability to distinguish in what ways psychotherapies are effective also has important implications for policy makers who dictate standards of healthcare and the allocation of resources. In Australia, the Better Access initiative provides Australian citizens with 10 rebated psychological sessions a year. However, for some clients 10 sessions is not enough and further treatment is required (APS, 2014). It is important that decisions about treatment duration should not be arbitrarily determined by policy makers, insurance agencies, or manualised treatments (Falkenström, Josefsson, Berggren, & Holmqvist, 2016; Stulz et al., 2013). Increased knowledge about how and when psychotherapy is effective could help policy makers contribute to major changes in clients' lives through the development of recommendations informed by a more comprehensive account of what is an effective psychotherapy. If systems and policies do not support the practice of effective treatments, not only will client care be adversely affected but the whole purpose of establishing treatment effectiveness is rendered moot. Furthermore, this may create an ethical dilemma for practitioners who are at once mandated by their workplaces, professional codes of conduct, and registering agencies to deliver evidence-based treatments, while being restricted in their ability to do so due to a potential lack of available resources for treatment. Ultimately, it is hoped that by expanding the criteria of effectiveness, clinicians' ability to match treatment and client factors will be enhanced for the benefit of clients.

REFERENCES

Anderson, G., & Cuijpers, P. (2009). "Psychological treatment" as an umbrella term for evidence-based psychotherapies? *Nordic Psychology*, *61*(2), 4–15. https://doi.org/10.1027/1901-2276.61.2.4

APA Presidential Task Force on Evidence-Based Practice (2006). Evidence-based practice in psychology. *American Psychologist*, *61*, 271–285. https://doi.org/10.1037/0003-066X.61.4.271

APS (Australian Psychological Society). (2010). *Evidence-based psychological interventions in the treatment of mental disorders: A literature review* (3rd ed.). Retrieved from http://www.psychology.org.au/Assets/Files/Evidence-Based-Psychological-Interventions.pdf

APS (Australian Psychological Society). (2014). Seven years of better access: Consumers show benefits from an effetive, afforable and destigmatising mental health reform. Retrieved from https://www.psychology.org.au/Assets/Files/2013-Better-Access-APS-report.pdf

Atkins, D. C., Bedics, J. D., McGlinchey, J. B., & Beauchaine, T. P. (2005). Assessing clinical significance: Does it matter which method we use? *Journal of Consulting and Clinical Psychology*, *73*, 982–989. https://doi.org/10.1037/0022-006X.73.5.982

Babione, J. M. (2010). Evidence-based practice in psychology: An ethical framework for graduate education, clinical training, and maintaining professional competence. *Ethics & Behavior*, *20*, 443–453. https://doi.org/10.1080/10508422.2010.521446

Barber, J. P. (2009). Toward a working through of some core conflicts in psychotherapy research. *Psychotherapy Research*, *19*, 1–12. https://doi.org/10.1080/10503300802609680

Barkham, M., Connell, J., Stiles, W. B., Miles, J. N. V., Margison, F., Evans, C., & Mellor-Clark, J. (2006). Dose–effect relations and responsive regulation of treatment duration: The good enough level. *Journal of Consulting and Clinical Psychology*, *74*, 160–167. https://doi.org/1037/0022-006X.74.1.160

Bickman, L., Andrade, A. R., & Lambert, E. W. (2002). Dose response in child and adolescent mental health services. *Mental Health Services Research*, *4*(2), 57–70.

Blatt, S. J., & Ford, R. Q. (1994). *Therapeutic change: An object relations perspective*. New York, NY: Plenum.

Bohart, A. C. (2000). The client is the most important common factor: Clients' Self-healing capacities and psychotherapy. *Journal of Psychotherapy Integration*, *10*, 127–149. https://doi.org/10.1023/A:1009444132104

Bohart, A. C. (2017). A client-centered perspective on "psychopathology". *Person-Centered & Experiential Psychotherapies*, *16*(1), 14–26. https://doi.org/10.1080/14779757.2017.1298051

Budd, R., & Hughes, I. (2009). The dodo bird verdict—Controversial, inevitable and important: A commentary on 30 years of meta-analysis. *Clinical Psychology and Psychotherapy*, *16*, 510–522. https://doi.org/10.1002/cpp.648

Buitelaar, J. K., Wilens, T. E., Zhang, S., Ning, Y., & Feldman, P. D. (2009). Comparison of symptomatic versus functional changes in children and adolescents with ADHD during randomized, double-blind treatment with psychostimulants, atomoxetine, or placebo. *Journal of Child Psychology and Psychiatry*, *50*, 335–342. https://doi.org/10.1111/j.1469-7610.2008.01960.x

Carey, T. A. (2011). Exposure and reorganization: The what and how of effective psychotherapy. *Clinical Psychology Review*, *31*, 236–248. https://doi.org/10.1016/j.cpr.2010.04.004

Carey, T. A., Mansell, W., & Tai, S. J. (2014). A biospychosocial model based on negative feedback and control. *Frontiers in Human Neuroscience*, *8*, 94. https://doi.org/10.3389/fnhum.2014.00094

Carey, T. A., Tai, S. J., & Stiles, W. B. (2013). Effective and efficient: Using patient-led appointment scheduling in routine mental health practice in remote Australia. *Professional Psychology: Research and Practice*, *44*, 405–414. https://doi.org/10.1037/a0035038

Castonguay, L. G., & Beutler, L. E. (2006). *Principles of therapeutic change that work*. New York, NY: Oxford University.

Chambless, D. L. (2006). Beware the dodo bird: The dangers of overgeneralization. *Clinical Psychology: Science and Practice*, *9*, 13–16. https://doi.org/10.1093/clipsy.9.1.13

Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, *66*, 7–18. https://doi.org/10.1037/0022-006X.66.1.7

Cooper, M., & Reeves, A. (2012). The role of randomised controlled trials in developing an evidence-base for counselling and psychotherapy. *Counselling and Psychotherapy Research*, *12*, 303–307. https://doi.org/10.1080/14733145.2012.687388

Crits-Christoph, P. (1997). Limitations of the dodo bird vedict and the role of clinical trials in psychotherapy research: Comment on Wampold et al. (1997). *Psychological Bulletin*, *122*, 216–220. https://doi.org/10.1037/0033-2909.122.3.216

Department of Health (Australia). (2011). *Fact sheet: Focussed psychological strategies continuing professional development*. Retrieved from http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-ba-focus.

Dyer, C., & Joseph, S. (2006). What is an RCT? *Counselling and Psychotherapy Research*, *6*, 264–265. https://doi.org/10.1080/14733140600986276

Edwards, D. J. A., Dattilio, F. M., & Bromley, D. B. (2004). Developing evidence-based practice: The role of case-based research. *Professional Psychology: Research and Practice*, *35*, 589–597. https://doi.org/10.1037/0735-7028.35.6.589

Ellis, A. (1980). The value of efficiency in psychotherapy. *Psychotherapy: Theory, Research & Practice*, *17*(4), 414–419. https://doi.org/10.1037/h0085940

Falkenström, F., Josefsson, A., Berggren, T., & Holmqvist, R. (2016). How much therapy is enough? Comparing dose-effect and good-enough models in two different settings. *Psychotherapy Theory, Research, Practice, Training*, *53*(1), 130–139. https://doi.org/10.1037/pst0000039

Field, A. P. (2013). Meta-analysis in clinical psychology research. In J. S. Comer & P. C. Kendall (Eds.), *The Oxford Handbook of Research Strategies for Clinical Psychology*. New York, NY: Oxford University Press.

Gaynor, S. T., Weersing, V. R., Kolko, D. J., Birmaher, B., Heo, J., & Brent, D. A. (2003). The prevalence and impact of large sudden improvements during adolescent therapy for depression: A comparison across cognitive-behavioral, family, and supportive therapy. *Journal of Consulting and Clinical Psychology*, *71*, 386–393. https://doi.org/10.1037/002-006x.71.2.386

Goldfried, M. R. (1980). Toward the delineation of therapeutic change principles. *American Psychologist*, *35*, 991–999.

Goldfried, M. R., & Davila, J. (2005). The role of relationship and technique in therapeutic change. *Psychotherapy: Theory, Research, Practice, Training*, *42*, 421–430. https://doi.org/10.1037/0033-3204.42.4.421

Green, D. (2012). Limitations of meta-analyses. *Journal of Autism and Developmental Disorders*, *42*, 1774–1775. https://doi.org/10.1007/s10803-011-1405-8

Greenberg, L. S. (1991). Research on the process of change. *Psychotherapy Research*, *1*, 3–16. https://doi.org/10.1080/10503309112331334011

Greer, T. L., Kurian, B. T., & Trivedi, M. H. (2010). Defining and measuring functional recovery from depression. *CNS Drugs*, *24*, 267–284. https://doi.org/10.2165/11530230-000000000-00000

Grissom, R. J. (1996). The magical number.7±.2: Meta-Meta-analysis of the probability of superior outcome in comparisons involving therapy, placebo, and control. *Journal of Consulting and Clinical Psychology*, *64*, 973–982. https://doi.org/10.1037/0022-006x.64.5.973

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, *18*, 59–82. https://doi.org/10.1177/1525822x05279903

Henry, W. (1998). Science, politics, and the politics of science: The use and misuse of empirically validated treatment research. *Psychotherapy Research*, *8*, 126–140. https://doi.org/10.1080/10503309812331332267

Hollon, S. D., & Wampold, B. E. (2009). Randomized controlled trials are relevant to clinical practice. *Canadian Journal of Psychiatry*, *54*, 637–643.

Howard, K. I., Kopta, S. M., Krause, M. S., & Orlinsky, D. E. (1986). The dose-effect relationship in psychotherapy. *American Psychologist*, *41*(2), 159–164. https://doi.org/10.1037/0003-066x.41.2.159

Howard, K. I., Krause, M. S., Saunders, S. M., & Kopta, S. M. (1997). Trials and tribulations in the meta-analysis of treatment differences: Comment on Wampold et al. (1997). *Psychological Bulletin*, *122*, 221–225. https://doi.org/10.1037/0033-2909.122.3.221

Hunsley, J. (2007). Addressing key challenges in evidence-based practice in psychology. *Professional Psychology: Research and Practice*, *38*(2), 113–121. https://doi.org/10.1037/0735-7028.38.2.113

Iwakabe, S., & Gazzola, N. (2009). From single-case studies to practice-based knowledge: Aggregating and synthesizing case studies. *Psychotherapy Research*, *19*, 601–611. https://doi.org/10.1080/10503300802688494

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, *59*, 12–19. https://doi.org/10.1037/0022-006x.59.1.12

Jadad, A. R., & Enkin, M. W. (2007). *Randomized controlled trials* (2nd ed.). Maldon, MA: Blackwell Publishing.

John, M., Jeffries, F. W., Acuna-Rivera, M., Warren, F., & Simonds, L. M. (2015). Development of measures to assess personal recovery in young people treated in specialist mental health services. *Clinical Psychology and Psychotherapy*, *22*(6), 513–524. https://doi.org/10.1002/cpp.1905

Kadera, S. W., Lambert, M. J., & Andrews, A. A. (1996). How much therapy is really enough? *The Journal of Psychotherapy Practice and Research*, *5*, 132–151.

Kazdin, A. E. (1999). The meanings and measurement of clinical significance. *Journal of Consulting and Clinical Psychology*, *67*, 332–339. https://doi.org/10.1037/0022-006x.67.3.332

Kazdin, A. E. (2001). Bridging the enormous gaps of theory with therapy research and practice. *Journal of Clinical Child Psychology*, *30*, 59–66. https://doi.org/10.1207/S15374424JCCP3001_7

Kazdin, A. E. (2008a). Evidence-based treatment and practice: New opportunities to bridge clinical research and practice, enhance the knowledge base, and improve patient care. *American Psychologist*, *63*, 146–159. https://doi.org/10.1037/0003-066X.63.3.146

Kazdin, A. E. (2008b). Evidence-based treatments and delivery of psychological services: Shifting our emphases to increase impact. *Psychological Services*, *5*, 201–215. https://doi.org/10.1037/a0012573

Kazdin, A. E. (2011). Evidence-based treatment research: Advances, limitations, and next steps. *American Psychologist*, *66*, 685–698. https://doi.org/10.1037/a0024975

Kazdin, A. E. (2014). Evidence-based psychotherapies I: Qualifiers and limitations in what we know. *South African Journal of Psychology*, *44*(4), 381–403. https://doi.org/10.1177/0081246314533750

Kazdin, A. E., & Nock, M. K. (2003). Delineating mechanisms of change in child and adolescent therapy: Methodological issues and research recommendations. *Journal of Child Psychology and Psychiatry*, *44*, 1116–1129. https://doi.org/10.1111/1469-7610.00195

Klein, M. J., & Elliott, R. (2006). Client accounts of personal change in process–experiential psychotherapy: A methodologically pluralistic approach. *Psychotherapy Research*, *16*, 91–105. https://doi.org/10.1080/10503300500090993

Krause, M. S., & Lutz, W. (2009). Process transforms inputs to determine outcomes: Therapists are responsible for managing process. *Clinical Psychology: Science and Practice*, *16*, 73–81. https://doi.org/10.1111/j.1468-2850.2009.01146.x

Levant, R. F., & Hasan, N. T. (2008). Evidence-based practice in psychology. *Professional Psychology: Research and Practice*, *39*, 658–662. https://doi.org/10.1037/0735-7028.39.6.658

Levitt, H. M., Butler, M., & Hill, T. (2006). What clients find helpful in psychotherapy: Developing principles for facilitating moment-to-moment change. *Journal of Counseling Psychology*, *53*, 314–324. https://doi.org/10.1037/0022-0167.53.3.314

Lipsey, M. W., & Wilson, D. B. (1993). The efficacy of psychological, educational, and behavioral treatment: Confirmation from meta-analysis. *American Psychologist*, *48*, 1181–1209. https://doi.org/10.1037/0003-066x.48.12.1181

Luborsky, L., Rosenthal, R., Diguer, L., Andrusyna, T. P., Berman, J. S., Levitt, J. T., … Krause, E. D. (2002). The dodo bird verdict is alive and well—Mostly. *Clinical Psychology: Science and Practice*, *9*, 2–12. https://doi.org/10.1093/clipsy/9.1.2

Malterud, K. (2001). Qualitative research: Standards, challenges, and guidelines. *The Lancet*, *358*, 483–488. https://doi.org/10.1016/S0140-6736(01)05627-6

McElvaney, J., & Timulak, L. (2013). Clients' Experience of therapy and its outcomes in "good" and "poor" outcome psychological therapy in a primary care setting: An exploratory study. *Counselling and Psychotherapy Research*, *13*, 246–253. https://doi.org/10.1080/14733145.2012.761258

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology*, *52*, 250–260. https://doi.org/10.1037/0022-0167.52.2.250

Morrow, S. L. (2007). Qualitative research in counseling psychology: Conceptual foundations. *The Counseling Psychologist*, *35*, 209–235. https://doi.org/10.1177/0011000006286990

Nelson, M. L., & Quintana, S. M. (2005). Qualitative clinical research with children and adolescents. *Journal of Clinical Child and Adolescent Psychology*, *34*, 344–356. https://doi.org/10.1207/s15374424jccp3402_14

Nilsson, T., Svensson, M., Sandell, R., & Clinton, D. (2007). Patients' Experiences of change in cognitive–behavioral therapy and psychodynamic therapy: A qualitative comparative study. *Psychotherapy Research*, *17*, 553–566. https://doi.org/10.1080/10503300601139988

Oddli, H. W., Nissen-Lie, H. A., & Halvorsen, M. S. (2016). Common therapeutic change principles as "sensitizing concepts": A key perspective in psychotherapy integration and clinical research. *Journal of Psychotherapy Integration.*. https://doi.org/10.1037/int0000033

Owen, J. J., Adelson, J., Budge, S., Kopta, S. M., & Reese, R. J. (2016). Good-enough level and dose-effect models: Variation among outcomes and therapists. *Psychotherapy Research*, *26*(1), 22–30. https://doi.org/10.1080/10503307.2014.966346

Reese, R. J., Toland, M. D., & Hopkins, N. B. (2011). Replicating and extending the good-enough level model of change: Considering session frequency. *Psychotherapy Research*, *21*, 608–619. https://doi.org/10.1080/10503307.2011.598580

Rennie, D. L. (2012). Qualitative research as methodical hermeneutics. *Psychological Methods*, *17*, 385–398. https://doi.org/10.1037/a0029250

Rosen, G. M., & Davison, G. C. (2003). Psychology should list empirically supported principles of change (ESPs) and not credential trademarked therapies or other treatment packages. *Behavior Modification*, *27*, 300–312. https://doi.org/10.1177/014544503253829

Rounsaville, B. J., & Carroll, K. M. (2002). Commentary on dodo bird revisited: Why aren't we dodos yet? *American Psychological Association*, *9*, 17–20. https://doi.org/10.1093/cipsy.9.1.17

Roussos, A. (2013). Introduction to special section on clients' perspective of change in psychotherapy. *Psychotherapy Theory, Research, Practice, Training*, *50*(4), 503–504. https://doi.org/10.1037/a0033847

Salmon, P. (2013). Assessing the quality of qualitative research. *Patient Education and Counseling*, *90*, 1–3. https://doi.org/10.1016/j.pec.2012.11.018

Salzer, M. S., Bickman, L., & Lambert, E. W. (1999). Dose-effect relationship in children's psychotherapy services. *Journal of Consulting and Clinical Psychology*, *67*(2), 228–238.

Silverstein, L. B., Auerbach, C. F., & Levant, R. F. (2006). Using qualitative research to strengthen clinical practice. *Professional Psychology: Research and Practice*, *37*, 351–358. https://doi.org/10.1037/0735-7028.37.4.351

Stiles, W. B. (2007). Theory-building case studies of counselling and psychotherapy. *Counselling and Psychotherapy Research*, *7*, 122–127. https://doi.org/10.1080/14733140701356742

Stiles, W. B. (2009a). Logical operations in theory-building case studies. *Pragmatic Case Studies in Psychotherapy*, *5*, 9–22. https://doi.org/10.14713/Pcsp.v5i3.973

Stiles, W. B. (2009b). Responsiveness as an obstacle for psychotherapy outcome research: It's Worse than you think. *Clinical Psychology: Science and Practice*, *16*, 86–91. https://doi.org/10.1111/j.1468-2850.2009.01148.x

Stiles, W. B. (2013). The variables problem and progress in psychotherapy research. *Psychotherapy Theory, Research, Practice, Training*, *50*, 33–41. https://doi.org/10.1037/a0030569

Stiles, W. B., Barkham, M., Connell, J., & Mellor-Clark, J. (2008). Responsive regulation of treatment duration in routine practice in United Kingdom primary care settings: Replication in a larger sample. *Journal of Consulting and Clinical Psychology*, *76*, 298–305. https://doi.org/10.1037/0022-006X.76.2.298

Stulz, N., Lutz, W., Kopta, S. M., Minami, T., & Saunders, S. M. (2013). Dose-effect relationship in routine outpatient psychotherapy: Does treatment duration matter? *Journal of Counseling Psychology*, *60*(4), 593–600. https://doi.org/10.1037/a0033589

Tang, T. Z., Luborsky, L., & Andrusyna, T. (2002). Sudden gains in recovering from depression: Are they also found in psychotherapies other than cognitive-behavioral therapy? *Journal of Consulting and Clinical Psychology*, *70*, 444–447. https://doi.org/10.1037/0022-006x.70.2.444

Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing*, *16*, 151–155. https://doi.org/10.1111/j.1744-6155.2011.00283.x

Timulak, L. (2009). Meta-analysis of qualitative studies: A tool for reviewing qualitative research findings in psychotherapy. *Psychotherapy Research*, *19*, 591–600. https://doi.org/10.1080/10503300802477989

Tryon, W. W. (2005). Possible mechanisms for why desensitization and exposure therapy work. *Clinical Psychology Review*, *25*, 67–95. https://doi.org/10.1016/j.cpr.2004.08.005

Tryon, W. W. (2009). Missing mechanism information. *American Psychologist*, *64*, 273–274. https://doi.org/10.1037/a0015348

Tryon, W. W. (2012). A connectionist network approach to psychological science: Core and corollary principles. *Review of General Psychology*, *16*, 305–317. https://doi.org/10.1037/a0027135

Tryon, W. W., & Misurell, J. R. (2008). Dissonance induction and reduction: A possible principle and connectionist mechanism for why therapies are effective. *Clinical Psychology Review*, *28*, 1297–1309. https://doi.org/10.1016/j.cprc2008.06.003

Walker, J. L. (2012). The use of saturation in qualitative research. *Canadian Journal of Cardiovascular Nursing*, *22*, 37–46.

Wampold, B. E. (2001). *The great psychotherapy debate: Models, methods, and findings*. Mahwah, NJ: Erlbaum.

Wampold, B. E., Mondin, G. W., Moody, M., & Ahn, H. (1997). The flat earth as a metaphor for the evidence for uniform efficacy of bona fide psychotherapies: Reply to Crits-Christoph (1997) and Howard et al. (1997). *Psychological Bulletin*, *122*, 226–230. https://doi.org/10.1037/0033-2909.122.3.226

Westen, D., Novotny, C. M., & Thompson-Brenner, H. (2004). The empirical status of empirically supported psychotherapies: Assumptions, findings, and reporting in controlled clinical trials. *Psychological Bulletin*, *130*, 631–663. https://doi.org/10.1037/0033-2909.130.4.631

Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology and Health*, *15*, 215–228. https://doi.org/10.1080/08870440008400302

Yoshikawa, H., Weisner, T. S., Kalil, A., & Way, N. (2013). Mixing qualitative and quantitative research in developmental science: Uses and methodological choices. *Qualitative Psychology*, *1*, 3–18. https://doi.org/10.1037/2326-3598.1.s.3

Ian Donald graduated with a Master of Clinical Psychology degree in 2008 and since this time has worked primarily with young people. He is a clinical psychologist in private practice at headspace Canberra, a specialist NGO providing early intervention to young people with mild-moderate mental health concerns. In addition to his clinical work, he is also currently completing a Doctor of Philosophy at the University of Canberra. He has a research interest in the process, principles, and mechanisms underlying therapeutic change.

Professor Tim Carey is the Director of the Centre for Remote Health in Alice Springs. Tim has a PhD in Clinical Psychology from the University of Queensland (QLD) and an MSc in Statistics from the University of St Andrews (Scotland). His work is informed by Perceptual Control Theory. He has been developing and evaluating patient-led appointment scheduling and the patient-perspective, a-diagnostic cognitive therapy known as the Method of Levels (MOL) for almost two decades in the UK and Australia. He has over 100 publications, an app called MindSurf, and regularly conducts training and supervision in the use of MOL and patient-led appointment scheduling.

How to cite this article: Donald IN, Carey TA. Improving knowledge about the effectiveness of psychotherapy. *Psychother Politics Int*. 2017;15:e1424. https://doi.org/10.1002/ppi.1424