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## **Expertise in Psychotherapy: An Elusive Goal?**

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Online First Publication, January 6, 2014. doi: 10.1037/a0035099

### CITATION

Tracey, T. J. G., Wampold, B. E., Lichtenberg, J. W., & Goodyear, R. K. (2014, January 6). Expertise in Psychotherapy: An Elusive Goal?. *American Psychologist*. Advance online publication. doi: 10.1037/a0035099

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# Expertise in Psychotherapy

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## *An Elusive Goal?*

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*It has been argued that psychotherapy is a profession without any expertise (Shanteau, 1992). We examine the validity of this claim, reviewing the literature on expertise, clinical decision making, and psychotherapeutic outcome assessment, and find it a reasonable assessment. There is no demonstration of accuracy and skill that is associated with experience as a therapist. We posit that this absence of an expertise–experience relation is attributable to therapists’ lack of access to quality outcome information regarding their interventions and an overreliance on fallible information-processing strategies even when such outcome information is available. The research on providing outcome feedback is reviewed, and although it does relate to client improvement, it has not been shown to be associated with any gains in therapist skill or expertise. We propose a model of outcome information usage and specific a priori hypothesis testing as a means of developing expertise.*

**Keywords:** clinical decision making, clinical feedback, expertise

**T**here is little debate regarding the efficacy and effectiveness of psychotherapy. Its benefits have been demonstrated repeatedly (Lambert & Ogles, 2004; Smith & Glass, 1977; Wampold, 2001a, 2001b). But as is the case for any human endeavor, the quality of psychotherapy varies across the people who provide it. Indeed, differences in outcomes among therapists have been detected in clinical trials (Baldwin & Imel, 2013; Crits-Christoph et al., 1991; Kim, Wampold, & Bolt, 2006), in naturalistic settings with therapists delivering a variety of treatments (Lutz, Leon, Martinovich, Lyons, & Stiles, 2007; Saxon & Barkham, 2012; Wampold & Brown, 2005), and in specialty clinics delivering a single evidence-based treatment (Laska, Smith, Wislocki, & Wampold, 2013). Clearly, some therapists are better than others—and, therefore, one could assert that there are some who are (or may be) “expert” therapists. But what *is* expertise in psychotherapy? How does it develop? What can be done to improve the expertise of therapists? We address these questions, but as will be demonstrated, expertise in psychotherapy is not a simple subject of inquiry.

In a review of expertise across professions, Shanteau (1992) identified several professions in which practitioners develop expertise, which he defined as increased quality of

performance that is gained with additional experience. These professions, which demonstrate there is a relation between experience and professional skill, include astronomers, test pilots, chess masters, mathematicians, accountants, and insurance analysts. Shanteau also identified several professions for which expertise was *not* demonstrated, including psychiatrists, college admissions officers, court judges, personnel selectors, as well as clinical psychologists. He attributed the differences between the two types of professions to the predictability of their outcomes and the availability of quality feedback.

We argue that the tasks of psychotherapy make it difficult to obtain quality feedback about past actions, which in turn makes it difficult to develop expertise (Shanteau, 1992). As noted, psychotherapy is efficacious, and although psychotherapy is not unique with regard to difficulties in developing expertise, attention needs to be devoted to understanding the constraints on the development of therapist expertise, with the goal being that such attention will lead to better training of psychotherapists and improvement in the quality of mental health services.

In this article, we review the literature on expertise and how it applies to psychotherapy. We then focus on the constraints on skilled practice as well as the developing literature on feedback to the therapist about client progress. Finally, we discuss the conditions that are necessary for feedback to lead to expertise.

Our premise, like Shanteau’s (1992) conclusion, is that over the course of one’s professional practice as a psychotherapist, there is little development of expertise. We posit that this lack of expertise development (i.e.,

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We wish to acknowledge and thank the Otsego Group for its helpful and always engaging discussions on the subject matter of this article.

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greater skill with greater experience) is attributable to the lack of information available to individual therapists regarding the outcomes of their interventions, the lack of adequate models about how psychotherapy produces benefits, and the difficulty of using the information that does exist to improve one's performance over time. We view the causes of this state of affairs as attributable to the current practice of psychotherapy and human information-processing difficulties and not as a failing that is unique or specific to psychotherapists as individuals.

## **Defining Expertise in Psychotherapy**

One of the most obvious and enduring problems with respect to research on expertise has been the absence of a commonly accepted operational definition of expert performance—a problem that persists in considering expertise in psychotherapy. A therapist's expertise has been variously defined or understood in terms of his or her (a) reputation, (b) performance, or (c) client outcomes. Each of these conceptualizations is flawed. Reputation includes peer nomination, degree attainment, professional distinction such as diplomate status granted by the American Board of Professional Psychology, and overall amount of experience. Although these are desirable characteristics, their connection to improved performance and client outcomes is tenuous.

Performance has been defined via the demonstration of skill in performing psychotherapy tasks. For example, the APA Presidential Task Force on Evidence-Based Practice (2006; Sackett, Strauss, Richardson, Rosenberg, & Haynes, 2000) defined expertise as involving competence related to (a) assessment, diagnostic judgment, systematic case formulation, and treatment planning; (b) clinical decision making, treatment implementation, and monitoring

of client progress; (c) interpersonal skills; (d) evaluation and use of research evidence; (e) understanding the influence of individual, cultural, and contextual differences; (f) understanding the influence of individual differences; and (g) having a cogent rationale for clinical strategies. These are desirable skills for a therapist to have, but they are difficult to define and assess, much less aggregate into an indicator of expertise. Further, an issue that arises is the distinction between expertise and competence. Although these two concepts are often used interchangeably, we think such usage fails to recognize that competence refers to capable performance, while expertise refers to expert performance that exceeds competence.

Performance has also been defined by treatment adherence, and the literature on the relation between treatment adherence and outcome is not clear. Webb, DeRubeis, and Barber (2010) found that, in general, competence in and adherence to clinical protocols (also known as "treatment manuals") appears to be unrelated to outcome overall, although these researchers did find modest support for relations with outcome when focusing on depression treatments. Also, research suggests that strict adherence to protocols might even attenuate therapeutic outcomes (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Henry, Strupp, Butler, Schacht, & Binder, 1993).

The final common definition of expertise is one based on client outcomes. Some have argued that the ultimate criterion of expertise is client outcome or client improvement (Wampold & Brown, 2005), with those therapists who produce the most improvement or best outcomes across clients being the experts. Although client outcome may be a reasonable criterion for evaluating expertise, especially considering accountability for services, it too is not without problems. Therapists do have an effect on outcomes of psychotherapy, although outcomes are due in large part to client variables, including severity of dysfunction, diagnosis, motivation (e.g., stage of change), social support, and resources (e.g., Bohart & Tallman, 2010; Groth-Marnat, Roberts, & Beutler, 2001). Some therapists work with more pathological or unmotivated clients than others and thus outcome scores will reflect this lack of comparability of client cases. In sum, there are many difficulties in the determination of individual expertise. However, here we focus on the expertise of the profession of psychotherapy and not on the determination of who is or is not an expert.

Given these limitations concerning the use simply of reputation, performance, or client outcome, we adopt the definition of expertise used by Shanteau (1992), which focuses on improvement over time. Expertise is improved performance that results from greater experience. Individuals should be able to use their practice to improve, and such improvement should manifest in better performance and outcomes.

As reasonable as this definition might be, the literature on experience fails to demonstrate that more experienced therapists are more effective than less experienced therapists (e.g., Hattie, Sharpley, & Rogers, 1984; Stein & Lambert, 1984, 1995; Wampold & Brown, 2005). Indeed,



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naturalistic studies have found that trainees attain client outcomes similar to those of licensed professionals (Beutler, 1997; Beutler et al., 2004; Budge et al., 2013; Laska et al., 2013; Minami et al., 2008; Okiishi, Lambert, Nielsen, & Ogles, 2003), as do untrained college professors (Strupp & Hadley, 1979). So there does not appear to be a relation between professional experience and increased skill even when client outcome is used as the basis of skill definition. This lack of relation between experience and skill is the key basis for Shanteau's (1992) conclusion.

## **Barriers to Achieving Expertise in Psychotherapy**

Several factors serve as barriers to achieving expertise in psychotherapy, including the cognitive and information processes of therapists, therapists' failure to engage routinely in deliberate practice, the inaccuracy of therapists' self-appraisals of their competence, and the lack of accurate feedback that affects learning. We address each of these barriers below.

### **Cognitive and Information-Processing Factors Affecting Expertise**

Cognitive differences between novices and experts (defined as those individuals who have better performance and outcomes) have been shown across a broad range of activities (domains), including computer programming, chess playing, teaching, driving a taxi cab, composing music, solving physics problems, deriving medical diagnoses, playing bridge, solving algebra word problems, solving economic problems, and judicial decision making (Chi, 2006; Feltovich, Prietula, & Ericsson, 2006). Compared with novices, experts have (a) the ability to perceive large meaningful patterns in their domain, (b) greater informa-

tion-processing speed and accuracy, (c) superior long- and short-term memory, (d) the ability to see and represent a problem in their domain at a deeper (more meaningful) level than novices, (e) greater time spent understanding or analyzing problems qualitatively, and (f) stronger self-monitoring skills (i.e., they are better than novices at evaluating their own performance). Said another way, experts differ from novices by having (a) a larger knowledge base, (b) a better organized or structured knowledge base, and (c) greater proceduralization (automatic processing) of decision making.

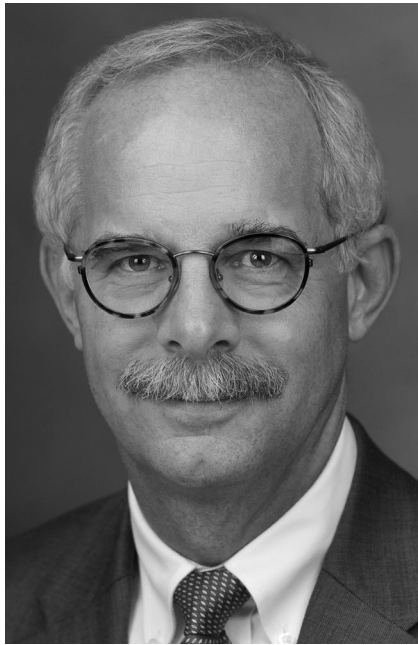
For most situations, experts are advantaged by their larger and more structured knowledge base and the greater proceduralization of their decision making. But under some circumstances, expert performance is likely to be hampered (Lewandowsky & Thomas, 2009) and therefore poorer than that of nonexperts (Ericsson & Lehmann, 1996). This occurs when (a) basic-level information or nonintegrated information has to be retrieved, (b) individuals are forced to restructure their existing knowledge to incorporate new, incompatible information, or (c) existing knowledge has to be deliberately or consciously selected or new knowledge has to be created.

Although experienced therapists have more complete conceptualizations of clients than do novices, the accuracy of these conceptualizations has not been supported (Faust, 1991; Garb, 1998, 2005). In this regard, Dawes (1994) conceded that professional clinicians may make somewhat slightly better judgments in some circumstances than nonprofessionals, but these differences can generally be explained in terms of differences in such characteristics as intelligence and by the fact that people who have learned how to use valid diagnostic techniques employ them better than people who have not learned to use them. Further, once the rudiments of the techniques have been mastered, the accuracy of therapists' judgments generally does *not* increase with additional experience using them. Apparently, the selective advantage that professionals have over nonprofessionals lies in their mastering of the basics of valid techniques—the accuracy of those judgments being constrained by the accuracy of the techniques they employ. That is, even in the hands of experts, questionable techniques yield questionable predictions and judgments. In summary, clinical experience per se appears to do little to enhance accuracy of therapists' clinical judgments.

### **Failure to Engage Routinely in Deliberate Practice**

A key aspect of professional expertise is that it is acquired through practice. More specifically, it is acquired through *deliberate* practice (Ericsson, 2006), which differs from mere exposure and repetition in several important ways. First, deliberate practice involves a well-defined, specific task that the learner seeks to master; second, task performance is followed by immediate feedback; third, there is opportunity for repetition; and fourth, learners must actively exploit the opportunity for improvement afforded by errors (Lewandowsky & Thomas, 2009, p. 143).

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But post-licensure therapists typically do not engage in this type of deliberate practice and, as we will discuss later, do not routinely obtain suitable feedback. As a consequence, Dawes (1994) was able to conclude, "The empirical data suggest that mental health professionals' accuracy of judgment does not increase with increasing experience" (p. 106).

Dawes's (1994) conclusion about the relationship between experience and expertise has not gone unchallenged. Perhaps the most recent of those challenges was Spengler et al.'s (2009) meta-analysis of 75 clinical judgment studies published between 1970 and 1996 that combined the experience of 4,607 clinicians. Spengler et al. found that the accuracy of clinical judgments *was* enhanced as a result of experience, although not by much (effect size:  $d = 0.12$ ). However, therapists specifically trained in or with extensive clinical experience in a particular domain were no more or less accurate in that specific domain than were those without such specific training or experience. Further, the study did not tease apart the contribution of training from that of experience. Although Spengler et al.'s effect size was significant (and as they interpreted it, "not trivial"), Lichtenberg (2009) noted in his commentary on their article, "There is much history (of non-significant experience effects) for such a small effect size to overcome" (p. 413). Moreover, Huppert et al. (2001) found that there was a small association of overall therapy experience and outcomes with cognitive behavioral therapy with panic disorder patients. However, Huppert et al. also found among their 14 therapists that there was no relation of specific experience in cognitive behavioral therapy with outcome. So although there may be some effects of experience with outcome, these effects are small and not associated with the specific interventions used. What does change with expe-

rience is clinicians' confidence, which we discuss in the next section.

### ***Inaccuracy of Therapists' Self-Appraisals of Competence***

Clinicians have very unrealistic appraisals of their own competence. Walfish, McAlister, O'Donnell, and Lambert (2012) found, for example, that 25% of clinicians view themselves in the top 10% and that none viewed themselves as below average. Such perceptions of one's own competence are not unusual. There is a general tendency to fail to recognize one's own incompetence (Dunning, Johnson, Ehrlinger, & Kruger, 2003). Moreover, as Dawes (1994) pointed out, self-estimates of ability continue to grow with experience, even though actual ability does not. Such unwarranted growth in clinicians' confidence with experience has received substantial empirical documentation (Friedlander & Phillips, 1984; Goldberg, 1959, 1968; Oskamp, 1962, 1965; Rock, Bransford, Maist, & Morey, 1987).

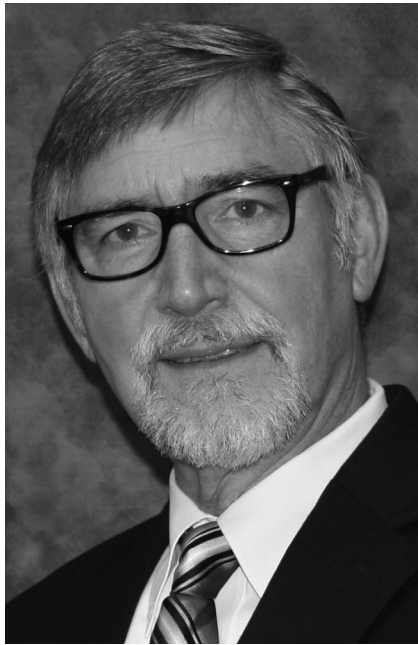
People's confidence in their perception of others increases with experience and the richness of their mental representations, but this is not related to any increases in accuracy (Gill, Swann, & Silvera, 1998). The confidence that experienced therapists have in their predictions and the accuracy of these predictions are poorly related (Ægisdóttir et al., 2006; Garb, 1989, 2005; Goldberg, 1968; Spengler et al., 2009; Strasser & Gruber, 2004; Wittman & Van den Bercken, 2007; Witteman, Weiss, & Metzmacher, 2012). But to the extent that therapists *believe* they are growing more competent with experience, they are less likely to be motivated to take actions (e.g., obtain and use critical feedback) that would enhance their actual expertise (Pittrich, 2003).

### ***Lack of Accurate Feedback***

In a recent article on the conditions for intuitive expertise (i.e., the development of expertise that arises from continued practice and experience), Kahneman and Klein (2009) concluded, like Shanteau (1992), that expertise develops when two conditions exist: (a) The environment is predictable and with explicit outcomes, and (b) there is an opportunity to learn, based on quality information on the accuracy of past decisions and predictions (see also Ericsson, 2006). But the typical practice of psychotherapy meets neither of these conditions. As a result, psychotherapy is a context that provides little feedback regarding the accuracy of past clinical decisions and behaviors as well as client outcomes in general. In this context, we employ Hattie and Timperley's (2007) definition of feedback, which concerns information that reduces the discrepancy between current understandings or behaviors and those that are desired. We attribute this lack of quality information as a key reason for the difficulty in the development of expertise in psychotherapists. But this does not mean that there is a lack of information that could be utilized; there is, although too often it is flawed.

Much of the information therapists receive comes from clients: both what the clients report and what the

**Rodney K. Goodyear**



therapists are able to observe about their clients' functioning. Unfortunately, both types of information tend to be unreliable.

The well-known "Barnum effect" (Meehl, 1956) can be used to exemplify problems with client reports. Clients have been found to be willing to accept almost any interpretation as accurate (C. R. Snyder, Shenkel, & Lowrey, 1977), so a client's report of therapist accuracy may be misleadingly affirmative. The literature on the predictive validity of interviewing has long demonstrated the weakness of interview-based decisions and predictions (Carroll, Wiener, Coates, Galegher, & Alibrio, 1982; DeVaul et al., 1987; Milstein, Wilkinson, Burrow, & Kessen, 1981)—a finding that has been shown to generalize to clinical practice (Garb, 1998; Oskamp, 1965). Using standardized interview formats or valid psychological assessment has been shown to provide better-quality information and enhanced validity of predictions.

Another problem related to information quality occurs with respect to the manner in which therapists assess treatment outcomes. Certainly therapists routinely make judgments about how their clients are functioning at termination and about the likelihood of their continuing to do well outside of therapy. From these judgments, they make outcome attributions and derive representations of why the changes occurred in therapy. This type of model creation is central to the work of therapists. In fact, Voss and his colleagues (Voss, Greene, Post, & Penner, 1983; Voss & Post, 1988; Voss, Tyler, & Yengo, 1983) have found that experts in any domain are better able than novices to build coherent and persuasive explanations for their solutions to problems.

But therapists rarely, if ever, test their models. It is uncommon enough for clinicians to get information on how

their clients are doing during their therapy, but it is rarer still for them to do so after termination. All that therapists generally have is the report of clients in the last few sessions. It is generally understood and accepted that these tend to be overly positive and unrepresentative outcome evaluations—a phenomenon that is sufficiently common that it has been named the Hello-Goodbye effect (Hathaway, 1948), in which client assessments made at termination tend to be inflated relative to those obtained shortly thereafter. Unfortunately, as far as feedback goes, the only definitive outcome information therapists may get is that which occurs when a client later returns for more treatment.

The problem, however, goes beyond the simple availability of quality information and gets to therapists' intentionality in seeking and using what information is available to them. It is instructive to consider conclusions Miller, Hubble, and Duncan (2008) have drawn from studying the very best therapists, who are defined as those with the highest outcomes. They found that these therapists "without exception possess a keen 'situational awareness': they are observant, alert and attentive. They compare new information constantly with what they already know" (Miller et al., 2008, p. 19). So we see the failure of therapists getting better with experience as related to cognitive processing issues and lack of quality outcome information. But these issues can be overcome.

## **Methods to Increase Expertise**

Studies of different interventions and large-scale insurance data systems provide abundant aggregate client outcome information. But there is relatively little reporting of outcome information to individual therapists and even less reporting of one clinician's client outcomes relative to that of other clinicians. We see the issue of obtaining information on how the client is progressing as crucial in the development of clinical skill. Further, the ways in which therapists use this information for hypothesis development and testing is essential. In what follows we report promising practices even as we consider factors that temper their overall effectiveness.

### **Systematic Feedback on Client Progress**

One source of feedback is the provision of client progress information to the therapist, an idea attributed to Ken Howard and colleagues (Howard, Moras, Brill, Martinovich, & Lutz, 1996) and developed and tested by both Michael Lambert and colleagues (Lambert, Hansen, & Finch, 2001) and Scott Miller and colleagues (Miller, Duncan, & Hubble, 2005). The systems for providing feedback about client progress to therapists (e.g., Barkham, Hardy, & Mellor-Clark, 2010; Duncan, Miller, Wampold, & Hubble, 2010; Lambert, 2010; Lambert et al., 2001; Lambert, Harmon, Slade, Whipple, & Hawkins, 2005; Miller, Duncan, & Hubble, 2005) involve several components.

- First, a measure is used to assess the functioning of the client periodically during therapy. Typically that measure is global, as opposed to disorder-specific, in that it assesses well-being, role functioning, interpersonal func-

tioning, as well as symptom distress, issues that are applicable across disorders.

- Second, normative trajectories of client progress are derived from the progress of large samples of clients.

- Finally, individual client progress is compared to the normative trajectories, and feedback is provided to the therapist about client progress relative to the norms, usually adjusted for “case mix.” For example, the therapist may receive a “red dot” or a “red light” if client progress is in the lowest percentiles—for example, if the client progress is less than the progress of 25% of clients with a comparable number of sessions and similar initial severity (Lambert et al., 2005; Miller, Duncan, & Hubble, 2005). Clients in this category have been labeled “not on track” (NOT) cases or signal cases. Because therapists typically do not recognize deteriorating cases (Hannan et al., 2005), providing therapists feedback on NOT cases demonstrates the discrepancy between the therapist’s view of client progress and actual client progress, which is hypothesized to be an important aspect of feedback interventions (Sapyta, Riemer, & Bickman, 2005). Therapists also receive feedback about clients who are progressing normally (i.e., their client’s change is at or above average) or are at risk for a poor outcome (i.e., below average but not in the bottom quartile).

There is sufficient evidence to conclude that providing this feedback to therapists positively affects outcome (Lambert & Shimokawa, 2011; Shimokawa, Lambert, & Smart, 2010). In randomized trials, clients in conditions in which their therapist received feedback had better outcomes than clients whose therapists did not receive feedback, although the effects were achieved primarily by reducing the proportion of clients who deteriorated—that is, by reducing the rate of failures in NOT cases (Lambert & Shimokawa, 2011; Shimokawa et al., 2010).

This is good news, but from our perspective and with particular regard to the development of therapist expertise, it is important to know what therapists who receive feedback do to improve their clients’ outcomes and to reduce the rate of deterioration. It may well be that therapists receiving feedback learn skills that are generalizable to other clients and thus become more competent therapists (i.e., develop expertise), or it may be that therapists simply pay more attention to NOT cases than they were doing previously, may query the client about progress (but only when prompted by a red dot or red signal), or may encourage the client to respond more positively. Unfortunately, there has been no research aimed at identifying what therapists do in response to feedback or what the feedback affects.

In this regard, studies examining feedback by and large have examined the outcomes of *clients* rather than the behavior of *therapists*. Consequently, it is difficult to know what effect feedback has on therapists and specifically on therapist expertise. Indeed, the usual practice is to provide feedback about clients rather than feedback about therapists. This difference is important. In the latter situation, therapists would receive feedback about their performance *relative to the performance of other therapists*, which

would then give therapists opportunity to understand the discrepancy between their belief about their competence and their actual competence. Although some systems are set up to provide therapists with feedback about their relative performance across clients, there has been no research focused on feedback to therapists about their performance relative to other therapists.

**Utility of systematically obtained client feedback.** Feedback to therapists would be important for two reasons. First, outcome differences across therapists seem to be robust in practice settings (Laska et al., 2013; Lutz et al., 2007; Saxon & Barkham, 2012; Wampold & Brown, 2005; see Baldwin & Imel, 2013, for a review). Some therapists consistently attain better outcomes than others, and therefore feedback should help the less effective therapists improve their performance. It would be informative to know whether feedback about the progress of individual clients or feedback about therapists’ relative performance is more helpful to therapists of different effectiveness levels. For example, it could be that feedback about clients would be more helpful to more effective therapists because these therapists may be more open to client information and skilled in using that information. Conversely, more effective therapists may already be aware of client progress through their interaction with clients, and it may be the less effective therapists, who need information about client progress, who benefit from feedback. Because therapists generally believe that they are effective (i.e., above average; Walfish et al., 2012), feedback concerning therapists’ relative efficacy would make apparent the discrepancy between self-assessment and actual performance, which represents a fruitful focus for future research.

**Necessary but insufficient for developing expertise.** We contend that feedback about client progress, either with regard to individual clients or with regard to therapists’ relative effectiveness, is necessary but not sufficient to develop expertise. Feedback about client progress provides no information about what actions are necessary to improve performance. To develop expertise, feedback needs to be specific to the important components of psychotherapy. That observation, unfortunately, reveals exactly why developing expertise in psychotherapy is so elusive. Generally speaking, there is little agreement about models of psychotherapy that would form the basis of focusing on component processes.

It should be clear that there are very different treatments, with very different protocols, for any given disorder, some of which have been identified as empirically supported or research based (<http://www.apa.org/divisions/div12/cppi.html>). According to this perspective, expertise is defined for a specific treatment as suggested by Waltz, Addis, Koerner, and Jacobson (1993). However, because all treatments that are intended to be therapeutic seem to be approximately equally effective (Laska, Gurman, & Wampold, in press; Wampold, 2001b; Wampold et al., 1997) it may well be that adherence to a protocol for a specific treatment may involve focusing on a component that does not produce better outcomes. Such speculation is



supported by the fact that protocol adherence generally does not seem to be related to outcome. In this regard, a meta-analysis by Webb et al. (2010) found no relation between treatment adherence and client outcome except for a small effect for depression treatments (and, interestingly, many very different treatments have been found to be efficacious for the treatment of depression). Indeed Boswell et al. (2013) have found that both adherence and competence deteriorate over time—the opposite of what one would expect if the expertise–experience relation were defined using adherence and competence as the criteria for expertise. At best, current practice supports the need for provision of normative information in every case about (a) client progress over treatment as well as (b) client outcome.

The presence of feedback information does not appear to lead to the development of expertise. A meta-analysis of the general use of feedback interventions across all domains, not just clinical domains, reveals a small positive effect size, but the results are quite variable, with roughly one third of the interventions producing negative effects (Kluger & DeNosi, 1996).

### **Planful Application of Feedback Information**

There are several recommendations in the literature for improving our clinical decision making, which serves as one the cornerstones of clinical intervention (e.g., Arkes, 1981; Dumont, 1991; Faust, 1991; Garb, 1998; Garb & Boyle, 2003; Goldberg, 1991; Salovey & Turk, 1991; Tracey & Rounds, 1999; Wierzbicki, 1993), but these recommendations apparently have had little effect (Lilienfeld, Lynn, & Lohr, 2003; Lilienfeld, Ritschel, Lynn, Cautin, & Latzman, 2013). As demonstrated by Lewandowsky, Ecker, Seifert, Schwarz, and Cook (2012), it is difficult to dispel mistaken or inaccurate information and conclusions, and so this state of affairs is to be somewhat expected.

Recommended procedures for enhancing clinical decision making and practice include (a) adopting a Bayesian approach by looking at base rates and the predictability of behavior, (b) obtaining quality information (e.g., relying on valid measures rather than impressions), (c) relying less on memory, (d) recognizing personal biases and their effects, (e) being aware of regression to the mean where less extreme behavior follows extreme behavior, and (f) adopting a disconfirming, scientific approach to practice. We see merit in each of these recommendations but wish to focus specifically on the last of these, that of adopting a disconfirming, scientific method. We see this as the most central recommendation relative to obtaining expertise. Three issues are of particular relevance to adopting a disconfirming, scientific approach: (a) overuse of confirmatory bias, (b) overuse of hindsight bias, and (c) failure to engage in specific hypothesis testing. Seeking to alter each of these issues is crucial in gaining expertise.

**Adopt a disconfirmatory approach.** People tend to seek confirmatory information concerning their beliefs (Davies, 2003; Granberg & Brent, 1983; Sears & Whitley, 1973) by seeking out and attending to information that confirms their concepts (Aldashev, Carletti, & Righi, 2011; Greenwald, Pratkanis, Leippe, & Baumgardner,

1986; Nisbett & Ross, 1980; M. Snyder & Campbell, 1980). The effect is that only partial evidence is perceived. This tendency to seek confirmation also has been demonstrated in therapists (Haverkamp, 1993; Strohmmer, Shivy, & Chiodo, 1990). If therapists believe something to be true, the natural approach is to look for evidence that confirms, rather than tests, this belief.

Such a confirmatory approach leads to biased information searches and a high probability of incorrect conclusions. A wiser approach would be to adopt a disconfirming approach. Using this approach, the individual specifies what information would be needed to render the belief wrong and then seeks such disconfirming information. Such disconfirming information searches yield more and better-quality information and thus provide a more accurate base for decision making (Aldashev et al., 2011; Davies, 2003).

**Avoid hindsight bias.** A second issue pertaining to the need to adopt a disconfirming, scientific approach is the avoidance of hindsight bias (Wedding & Faust, 1989) in clinical practice. Hindsight bias is akin to “Monday morning quarterbacking,” in which everyone knows the optimal play after the fact. Such post hoc construction of models and explanations creates an illusion of learning in which individuals believe these counterfactual models to be accurate and that they knew about them all along (Roese & Vohs, 2012).

Although post hoc models do have some utility in furthering our understanding of clients, this learning is illusory in that it is never really examined. There is no a priori testing of hypotheses that emanate from therapists’ understanding of the client. Hindsight bias is used frequently in practice (Arkes, Faust, Guilmette, & Hart, 1988; Arkes, Wortmann, Saville, & Harkness, 1981; Fischhoff, 1975) and results, unfortunately, in a lack of information gathering. If new information arises, then it is easily incorporated into clinical conceptualizations after the fact (Roese & Vohs, 2012). As a result, clinicians are rarely wrong because they have never really tested the validity of their beliefs. Hindsight bias is especially salient with respect to getting and dealing with feedback on client outcomes. If a therapist learns that a client had lower outcomes than thought based on termination comments, it becomes relatively easy to construct an explanation. But the key issue is that this explanation then needs to be explicitly tested on new clients. If the therapist made strong predictions about the outcome and then found out that the actual outcome differed, he or she would then have clear information on the need to change the clinical formulation. The probability of subsequent hypothesis specification would probably be greater in this case, and the likelihood of testing these hypotheses with future clients should also increase. A similar process could be used in ongoing work with continuing clients. Generating explicit predictions about client progress and then receiving feedback on the extent of that progress serves as an explicit guard against hindsight bias.

**Explicitly test hypotheses.** The final aspect of our advocating the adoption of a disconfirming, scientific approach is the clear specification and evaluation of clinical

hypotheses. This evaluation requires collecting disconfirming information relative to future, not past, behavior. We argue that learning occurs by specifying and then testing specific, a priori, empirically verifiable hypotheses. If a therapist claims that a client will perform certain behaviors based upon his or her conceptualization of the client, the therapist needs to propose specific hypotheses, focusing on specific evidence that would disconfirm the hypothesis (i.e., alternative hypotheses), and then set up conditions to test the hypothesis. Doing this in a prospective manner enables the acquisition of information on the validity of the models and one's hypotheses. Evidence of inaccuracy is unequivocal and necessitates a change in the understanding of the client.

In this regard, we are suggesting that psychotherapists fail to develop clinical expertise because of their failure to adopt a disconfirming scientific process in practice even when there is quality feedback information such as information on outcomes. As an oversimplified example, a clinician with poorer than expected outcomes might hypothesize that the relative ratio of focus on positive to negative content could be a key variable accounting for these results. The clinician could then systematically vary the content of the session to see its effect on progress and outcomes. What also would be needed is a specification of what should occur in session should this hypothesis be either (a) correct or (b) incorrect. Besides the value of the specification of a hypothesis, it is the addition of the disconfirmation that makes this strategy valuable.

A key aspect of the disconfirming, scientific method is the generation of testable hypotheses. Although it is not difficult to proffer hypotheses—indeed, it is done frequently—a key requirement is that the hypotheses be embedded in a clearly articulated model of client processing and behavior. The tests of the hypotheses generated by the model thus provide information on the validity of the model. It is this generation of specific hypotheses, confirmed by experience in deliberate practice, that, we believe, forms the basis of the development of psychotherapeutic expertise. A recent study found that therapist perceptions of professional self-doubt were positively related to therapy outcome (Nissen-Lie, Monsen, Ulleberg, & Rønnestad, 2012). Although this professional self-doubt may not explicitly comprise our proposed scientific testing, it does appear to encompass a critical evaluation of one's work from a disconfirming stance. Williams, Dunning, and Kruger (2013) have demonstrated that inflated self-assessments of performance are associated with rational, rule-based methods relative to more variable approaches. Given the high occurrence of confirmatory approaches, it is likely that this rule-based rational approach includes a good deal of confirmatory bias. So being more pessimistic regarding one's client's outcome may be an asset in that it may be associated with the application of more alternative explanations than the rule-based confirmatory method.

**Deliberate practice.** Miller (Miller, Duncan, Sorrell, & Brown, 2005; Miller, Hubble, Chow, & Seidel, 2013) has recommended deliberate practice as the means by which clinical expertise can be attained. Deliberate

practice is defined as the explicit setting aside of private time to review one's behavior and outcome feedback, developing plans for improvement, and then following through on these. The expertise literature has demonstrated that such deliberate practice is associated with the attainment of expertise in a variety of domains (Ericsson, 2009). However, recent research has demonstrated, at least with chess masters, that deliberate practice is necessary, but not sufficient, for the development of expertise (Campitelli & Gobet, 2011). The specific type of deliberate practice matters. Fischer, Fischer, Weisweiler, and Frey (2010) found that confirmatory bias was greatest in conditions of deliberate cognitive analysis and intuitive and gut feelings. Conditions of distraction (i.e., doing other tasks) resulted in the least confirmatory bias. So deliberate rational processing alone (or intuitive processing alone) does not result in disconfirmatory processing. Given the literature on disconfirmatory or alternative hypothesis testing, it would be expected that this reflective method of deliberate processing coupled with alternate hypothesis generation would also result in less confirmatory bias. We agree with Miller, Duncan, et al. (2005; Miller et al., 2013) that deliberate practice is essential, but we add that this practice should be of a particular form, that of setting aside explicit time to generate a priori alternative or disconfirmatory hypotheses and then testing them explicitly. Simply reflecting in a deliberate manner on feedback information is insufficient.

## Conclusion

Shanteau (1992) claimed that the practice of psychotherapy does not have an expertise base in that there is little relation between experience and gains in professional skill. We have discussed several aspects of psychotherapy that make the development of expertise as a therapist particularly difficult. Essentially, psychotherapy is a process about which the therapist receives little explicit and valid feedback about what actions are productive of a therapeutic outcome.

Notwithstanding the above difficulty, there is extensive evidence that psychotherapy is effective. As well, there are documented differences among the outcomes achieved by therapists—some therapists consistently achieve better outcomes than others. Thus, although it appears that there exists such a thing as expertise, little is known about what differentiates the more effective therapists from others; certainly it does not appear to be the type of therapy delivered or the experience of the therapist (Beutler et al., 2004). What has emerged is that more effective therapists appear to be able to form working alliances across a range of clients (Baldwin, Wampold, & Imel, 2007) and have a greater level of facilitative skills (Anderson, Ogles, Patterson, Lambert, & Vermeersch, 2009). But this information provides little that is actionable to facilitate the development of expertise. Clearly, more research about the process and outcome of psychotherapy is needed (see Kazdin, 2008), including what characterizes expert therapists with better outcomes, because it is clear

that better outcomes do not emerge as a function of experience.

Despite the barriers to developing expertise in psychotherapy, there is much clinicians can do. Increasingly, there are reliable benchmarks for various disorders (e.g., see Minami et al., 2008, with regard to depression) to which therapists can compare the progress made by their clients. Therapists can use feedback about client progress to adjust therapy to achieve optimal outcomes and to compare their outcomes to those of other therapists. Therapists, particularly those who are underperforming relative to other therapists, can seek to improve.

In this regard, therapists may need to augment their general therapeutic competence or they may need to be trained to provide particular evidence-based psychological treatments, depending on the reasons for their relatively poor performance. It is crucial that therapists obtain quality information about both client and therapist outcomes if they are to establish expertise. However, as we have argued, outcome information alone, even if of high quality, does not ensure that expertise will develop. Cognitive heuristics, especially hindsight bias, can minimize the impact of outcome information on future practice. To benefit from quality information, therapists are encouraged to adopt a prospective testing of hypotheses, where the outcome information serves as the criterion. It is our hypothesis that adopting such a disconfirming, scientific approach to practice will result in expertise gains among therapists.

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