

Report of the 2005 Presidential Task Force on Evidence-Based Practice¹

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From the very first conceptions of applied psychology as articulated by Lightner Witmer, who formed the first psychological clinic in 1896 (McReynolds, 1997), psychologists have been deeply and uniquely associated with an evidence-based approach to patient care. As Witmer pointed out (1907/1996, pg. 249), “the pure and the applied sciences advance in a single front. What retards the progress of one retards the progress of the other; what fosters one fosters the other.” As early as 1947 the idea that doctoral psychologists should be trained as both scientists and practitioners became the American Psychological Association (APA) policy (Shakow, Hilgard, Kelly, Luckey, Sanford, & Shaffer, 1947). Early practitioners such as Frederick C. Thorne articulated the methods by which psychological practitioners integrate science into their practice by ... “increasing the application of the experimental approach to the individual case into the clinician’s own experience” (Thorne, 1947, pg. 159). Thus, psychologists have been on the forefront of the development of evidence-based practice for decades.

Evidence-based practice in psychology is therefore consistent with the past twenty years of work in evidence-based medicine, which advocated for improved patient outcomes by informing clinical practice with relevant research (Sox & Woolf, 1993; Woolf & Atkins, 2001). Sackett and colleagues describe evidence-based medicine as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients” (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996, pp. 72-73). The use and misuse of evidence-based principles in the practice of health care has affected the dissemination of health care funds, but not always to the benefit of the patient. Therefore, psychologists, whose training is grounded in empirical methods, have an important role to play in the continuing development of evidence-based practice and its focus on improving patient care.

One approach to implementing evidence-based practice in health care systems has been through the development of guidelines for best practice. During the early part of the evidence-based practice movement, APA recognized the importance of a comprehensive approach to the conceptualization of guidelines. APA also recognized the risk that guidelines might be used inappropriately by commercial health care organizations not intimately familiar with the scientific basis of practice to dictate specific forms of treatment and restrict patient access to care. In 1992, APA formed a joint task force of the Board of Scientific Affairs (BSA), the Board of Professional Affairs (BPA), and the Committee for the Advancement of Professional Practice (CAPP). The document developed by this task force—the *Template for Developing Guidelines: Interventions for Mental Disorders and Psychosocial Aspects of Physical Disorders* (Template)—was approved by the APA Council of Representatives in 1995 (APA, 1995). The Template described the variety of evidence that should be considered in developing guidelines, and cautioned that any emerging clinical practice guidelines should be based on careful systematic weighing of research data and clinical expertise. The Template noted,

The successful construction of guidelines relies on the availability of adequate scientific and clinical evidence concerning the intervention being applied and the diagnostic condition being treated. ...Panels (should) weigh the available evidence according to

accepted standards of scientific merit, recognizing that the warrant for conclusions differs widely for different bodies of data. (p.2)

Both the Template and the subsequent revised policy document that replaced it—the *Criteria for the Evaluation of Treatment Guidelines* (APA, 2002)—were quite specific in indicating that the evidence base for any psychological intervention should be evaluated in terms of two separate dimensions: *Efficacy* and *Clinical Utility*. The dimension of *Efficacy* lays out criteria for the evaluation of the strength of evidence pertaining to establishing causal relationships between interventions and disorders under treatment. The *Clinical Utility* dimension includes a consideration of available research evidence and clinical consensus regarding the generalizability, feasibility (including patient acceptability), and costs and benefits of interventions.

The Template was used to examine a selection of available mental health treatment guidelines and found wide variation in the quality of their coverage of the relevant literature as well as the scientific and clinical basis, specificity, and generalizability of their treatment recommendations (Stricker, Abrahamson, Bologna, Hollon, Robinson, & Reed, 1999). Even guidelines that were clearly designed to educate rather than to legislate, were interdisciplinary in nature, and provided extensive empirical and clinical information did not always accurately translate the evidence they reviewed into the algorithms that determined the protocol for treatment under particular sets of circumstances. Psychologists have been particularly concerned about widely disseminated practice guidelines that recommend the use of medications over psychological interventions in the absence of data supporting such recommendations (Barlow, 1996; Beutler, 1998; Muñoz, Hollon, McGrath, Rehm, & VandenBos, 1994; Nathan, 1998).

The general benefits of psychotherapy had been established by meta-analytic reviews during the 1970s (Smith & Glass, 1977; Smith, Glass, & Miller, 1980). Nevertheless, a perception existed in many corners of the health delivery system that psychological treatments for particular disorders were either ineffective or inferior to pharmacological treatment. In 1995, the Division 12 (Clinical Psychology) Task Force on Promotion and Dissemination of Psychological Procedures, in an effort to promote treatments delivered by psychologists, published criteria for identifying empirically validated treatments (subsequently relabeled empirically supported treatments) for particular disorders (Chambless et al., 1996; 1998). This Task Force identified 18 treatments whose empirical support they considered to be well established based on criteria that included having been tested in randomized controlled trials (RCTs) with a specific population and implemented using a treatment manual.

Although the goal was to identify treatments with evidence for efficacy comparable to the evidence for the efficacy of medications, and hence to highlight the contribution of psychological treatments, the Division 12 Task Force report sparked a decade of both enthusiasm and controversy. The report increased recognition of demonstrably effective psychological treatments among the public, policymakers, and training programs. At the same time, many psychologists raised concerns about the exclusive focus on brief, manualized treatments; the emphasis on specific treatment effects as opposed to common factors that account for much of the variance in outcomes across disorders; and the applicability to a diverse range of patients varying in comorbidity, personality, race, ethnicity, and culture.

In response, several groups of psychologists, including other divisions of APA, offered additional frameworks for integrating the available research evidence. In 1999, APA Division 29 (Psychotherapy) established a task force to identify, operationalize, and disseminate information on empirically supported therapy relationships, given the powerful association between outcome and aspects of the therapeutic relationship such as the therapeutic alliance (Norcross, 2001). Division 17 (Counseling Psychology) also undertook an examination of empirically supported treatments in counseling psychology (Wampold, Lichtenberg, & Waehler, 2000). The Society of Behavioral Medicine, which is not a part of APA but which has significantly overlapping membership, has recently published criteria for examining the evidence base for behavioral medicine interventions (Davidson, et al., 2003). As of this writing, we are aware that task forces have been appointed to examine related issues by a large number of APA divisions concerned with practice issues.

At the same time that these groups within psychology have been grappling with how best to conceptualize and examine the scientific basis for practice, the evidence-based practice movement has become a key feature of health care systems and health care policy. At the state level, a number of initiatives encourage or mandate the use of a specific list of mental health treatments within state Medicaid programs (e.g., Carpinello, Rosenberg, Stone, Schwager, & Felton, 2002; Chorpita et al., 2002; see also Reed & Eisman, in press, and Tanenbaum, 2005). At the federal level, a major joint initiative of the National Institute of Mental Health (NIMH) and the DHHS Substance Abuse and Mental Health Services Administration (SAMHSA) focuses on promoting, implementing, and evaluating evidence-based mental health practices within state mental health systems (e.g., see National Institutes of Health, 2004). The goals of evidence-based practice initiatives to improve quality and cost-effectiveness and to enhance accountability are laudable and broadly supported within psychology, although empirical evidence of system-wide improvements following their implementation is still limited. However, the psychological community—including both scientists and practitioners—is concerned that evidence-based practice initiatives not be misused as a justification for inappropriately restricting access to care and choice of treatments.

The Task Force

It was in this context that 2005 APA President Ronald F. Levant, Ed.D., appointed the APA Presidential Task Force on Evidence-Based Practice (Task Force). The Task Force included scientists and practitioners from a wide range of perspectives and traditions, reflecting the diverse perspectives within the field. All Task Force members shared the core value of delivering the best possible care based on the best available evidence.

The Task Force was asked to begin with the definition of evidence-based practice adapted from Sackett, Straus, Richardson, Rosenberg and Haynes (2000) by the Institute of Medicine (2001) in its influential report, *Crossing the Quality Chasm: A New Health System for the 21st Century*: “Evidence-based practice is the integration of best research evidence with clinical expertise and patient values” (p. 147).

The Task Force charge was as follows:

1. To consider how a broad range of research evidence—including effectiveness research, public health research, health services research, and health care economics—should be integrated in a consideration of evidence in the practice of psychology.
2. To articulate and explicate the application and appropriate role of clinical expertise in treatment decision making, including a consideration of the multiple streams of evidence that must be integrated by clinicians and a consideration of relevant research regarding expertise and clinical decision-making.
3. To articulate and explicate the role of patient values in treatment decision making, including a consideration of the role of ethnicity, race, culture, language, gender, sexual orientation, religion, age, and disability status, and the issue of treatment acceptability and consumer choice.

The Task Force was instructed to limit their consideration to evidence-based practice as it relates to health services provided by psychologists. Therefore, other organizational, community, or educational applications of evidence-based practice by psychologists are outside the scope of this report. Further, the Task Force was charged with defining and explicating principles of evidence-based practice in psychology but not with developing practice guidelines for individual psychologists or with other forms of implementation.

Relevant background materials were assembled by APA staff. Task Force members and other interested parties were asked to nominate additional materials. The Task Force held face-to-face meetings in October 2004 and January 2005. Through an iterative process of small working groups and subsequent review and revision of all drafts by the entire group, the Task Force achieved consensus in support of draft versions of its two primary work products. These were: 1) a draft APA policy regarding evidence-based practice; and 2) a draft report providing additional background for the policy statement.

The draft policy statement and report were placed on the Cross-Cutting Agenda for the March 2005 APA Consolidated Board and Committee Meetings for review and comment by governance groups. The documents, with a request for review and comment, were also sent to presidents and presidents-elect of all APA divisions; presidents, presidents-elect, and executive directors of all state and provincial psychological associations; and all members of the APA Council of Representatives. In addition, notice of the documents' availability for review and comment was published in the March 2005 *APA Monitor* and publicized on the front page of the APA website. The documents were posted on March 1, 2005 with an electronic form for submitting comments, which were accepted through April 18.

A total of 199 sets of comments were submitted. Eight responses were submitted by APA boards and committees, six officially on behalf of individual divisions, one by an interdivisional task force, and one by a joint task force of division and an external organization. Two responses were submitted officially on behalf of state psychological associations. Five external

organizations sent comments. In addition, 169 individual APA members and seven individual non-members submitted comments.

Each of these comments was reviewed and discussed by the Task Force in a series of conference calls. The Task Force held its final meeting in June 2005. At this meeting, the Task Force achieved consensus on revised versions of the proposed APA policy statement and the current report. These documents are intended for submission to the Board of Directors and Council of Representatives in August 2005. The Task Force hopes that the APA Council of Representatives will approve the proposed policy statement as APA policy. The Task Force intends that the Council of Representatives simply receive the present report, which provides additional background and rationale for the proposed policy statement.

In this report, The Task Force hopes to draw on APA's century-long tradition of attention to the integration of science and practice by creating a document that describes psychology's fundamental commitment to sophisticated evidence-based psychological practice and takes into account the full range of evidence that policy makers must consider. We aspire to set the stage for further development and refinement of evidence-based practice for the betterment of psychological aspects of health care as delivered around the world.

Definition

Based on its review of the literature and its deliberations, the Task Force agreed on the following definition:

Evidence-based practice in psychology (EBPP) is the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences.

This definition of EBPP closely parallels the definition of evidence-based practice adopted by the Institute of Medicine (IOM, 2001, p. 147) as adapted from Sackett and colleagues (2000): "Evidence-based practice is the integration of best research evidence with clinical expertise and patient values." Psychology builds on the IOM definition by deepening the examination of clinical expertise and broadening the consideration of patient characteristics. The purpose of EBPP is to promote effective psychological practice and enhance public health by applying empirically supported principles of psychological assessment, case formulation, therapeutic relationship, and intervention.

Psychological practice entails many types of interventions, in multiple settings, for a wide variety of potential patients. In this document, *intervention* refers to all direct services rendered by health care psychologists, including assessment, diagnosis, prevention, treatment, psychotherapy, and consultation. As is the case with most discussions of evidence-based practice, we focus on treatment. The same general principles apply to psychological assessment, which is essential to effective treatment. The *settings* include but are not limited to hospitals, clinics, independent practices, schools, military, public health, rehabilitation institutes, primary care, counseling centers, and nursing homes.

To be consistent with discussions of evidence-based practice in other areas of health care, we use the term *patient* in this document to refer to the child, adolescent, adult, older adult, couple, family, group, organization, community, or other populations receiving psychological services. However, we recognize that in many situations there are important and valid reasons for using such terms as *client*, *consumer*, or *person* in place of *patient* to describe the recipients of services. Further, psychologists target a variety of problems, including but not restricted to mental health, academic, vocational, relational, health, community, and other problems, in their professional practice.

It is important to clarify the relation between EBPP and ESTs (empirically supported treatments). EBPP is the more comprehensive concept. ESTs start with a treatment and ask whether it works for a certain disorder or problem under specified circumstances. EBPP starts with the patient and asks what research evidence (including relevant results from RCTs) will assist the psychologist to achieve the best outcome. In addition, ESTs are specific psychological treatments that have been shown to be efficacious in controlled clinical trials, whereas EBPP encompasses a broader range of clinical activities (e.g., psychological assessment, case formulation, therapy relationships). As such, EBPP articulates a decision making process for integrating multiple streams of research evidence, including but not limited to RCTs, into the intervention process.

The following sections explore in greater detail the three major components of this definition—best available research, clinical expertise, and patient characteristics—and their integration.

Best Available Research Evidence

A sizeable body of scientific evidence drawn from a variety of research designs and methodologies attests to the effectiveness of psychological practices. The research literature on the effect of psychological interventions indicates that these interventions are safe and effective for a large number of children and youth (Weisz, Hawley & Doss, 2004; Kazdin & Weisz, 2003), adults (Barlow, 2004; Nathan & Gorman, 2002; Roth & Fonagy, 2004; Wampold et al., 1997) and older adults (Zarit & Knight, 1996; Duffy, 1999) across a wide range of psychological, addictive, health, and relational problems. More recent research indicates that compared to alternative approaches, such as medications, psychological treatments are particularly enduring (Hollon, Stewart, & Strunk, in press). Further, research demonstrates that psychotherapy can and often does pay for itself in terms of medical costs offset, increased productivity, and life satisfaction (Chiles, Lambert, & Hatch, 2002; Yates, 1994).

Psychologists possess distinctive strengths in designing, conducting, and interpreting research studies that can guide evidence-based practice. Moreover, psychology—as a science and as a profession—is distinctive in combining scientific commitment with an emphasis on human relationships and individual differences. As such, psychology can help develop, broaden, and improve the research base for evidence-based practice.

There is broad consensus that psychological practice needs to be based on evidence, and that research needs to balance internal and external validity. Research will not always address all practice needs. Major issues in integrating research in day to day practice include: a) the relative weight to place on different research methods; b) the representativeness of research samples; c)

whether research results should guide practice at the level of principles of change, intervention strategies, or specific protocols; d) the generalizability and transportability of treatments supported in controlled research to clinical practice settings; e) the extent to which judgments can be made about treatments of choice when the number and duration of treatments tested has been limited; and f) the degree to which the results of efficacy and effectiveness research can be generalized from primarily white samples to minority and marginalized populations (see Westen, Novotny, and Thompson-Brenner, 2004, as well as contrasting position papers in Norcross, Beutler, & Levant, 2005). Nevertheless, research on practice has made progress in investigating these issues and is providing research evidence that is more responsive to day-to-day practice. There is sufficient consensus to move forward with the principles of EBPP.

Meta-analytic investigations since the 1970s have shown that most therapeutic practices in widespread clinical use are generally effective for treating a range of problems (Lambert & Ogles, 2004; Wampold, 2001). In fact, the effect sizes for psychological interventions for children, adults and older adults rival, or exceed, those of widely accepted medical treatments (Rosenthal, R. 1990; Barlow 2004; Lipsey & Wilson, 2001; Weisz, Jensen, & McLeod, 2005). It is important not to assume that interventions that have not yet been studied in controlled trials are ineffective. Specific interventions that have not been subjected to systematic empirical testing for specific problems cannot be assumed to be either effective or ineffective; they are simply untested to date. Nonetheless, good practice and science call for the timely testing of psychological practices in a way that adequately operationalizes them using appropriate scientific methodology. Widely used psychological practices as well as innovations developed in the field or laboratory should be rigorously evaluated and barriers to conducting this research should be identified and addressed.

Multiple Types of Research Evidence

Best research evidence refers to scientific results related to intervention strategies, assessment, clinical problems, and patient populations in laboratory and field settings as well as to clinically relevant results of basic research in psychology and related fields. APA endorses multiple types of research evidence (e.g., efficacy, effectiveness, cost-effectiveness, cost-benefit, epidemiological, treatment utilization studies) that contribute to effective psychological practice.

Multiple research designs contribute to evidence-based practice, and different research designs are better suited to address different types of questions (Greenberg & Newman, 1996). These include:

- Clinical observation (including individual case studies) and basic psychological science are valuable sources of innovations and hypotheses (the context of scientific discovery).
- Qualitative research can be used to describe the subjective lived experience of people, including participants in psychotherapy.
- Systematic case studies are particularly useful when aggregated as in the form of practice research networks for comparing individual patients to others with similar characteristics.
- Single case experimental designs are particularly useful for establishing causal relationships in the context of an individual.

- Public health and ethnographic research are especially useful for tracking the availability, utilization, and acceptance of mental health treatments as well as suggesting ways of altering them to maximize their utility in a given social context.
- Process-outcome studies are especially valuable for identifying mechanisms of change.
- Studies of interventions as delivered in naturalistic settings (effectiveness research) are well suited for assessing the ecological validity of treatments.
- Randomized clinical trials and their logical equivalents (efficacy research) are the standard for drawing causal inferences about the effects of interventions (context of scientific verification).
- Meta-analysis is a systematic means to synthesize results from multiple studies, test hypotheses, and quantitatively estimate the size of effects.

With respect to evaluating research on specific interventions, current APA policy identifies two widely accepted dimensions. As stated in the *Criteria for Evaluating Treatment Guidelines* (APA, 2002, p. 1053), “The first dimension is *treatment efficacy*, the systematic and scientific evaluation of whether a treatment works. The second dimension is *clinical utility*, the applicability, feasibility, and usefulness of the intervention in the local or specific setting where it is to be offered. This dimension also includes determination of the generalizability of an intervention whose efficacy has been established.” Types of research evidence with regard to intervention research in ascending order as to their contribution to conclusions about efficacy include: clinical opinion, observation, and consensus among recognized experts representing the range of use in the field (Criterion 2.1); systematized clinical observation (Criterion 2.2); and sophisticated empirical methodologies, including quasi experiments and randomized controlled experiments or their logical equivalents (Criterion 2.3). Among sophisticated empirical methodologies, “randomized controlled experiments represent a more stringent way to evaluate treatment efficacy because they are the most effective way to rule out threats to internal validity in a single experiment” (p. 1054).

Evidence on clinical utility is also crucial. As per established APA policy (APA, 2002), at a minimum this includes attention to generality of effects across varying and diverse patients, therapists and settings and the interaction of these factors, the robustness of treatments across various modes of delivery, the feasibility with which treatments can be delivered to patients in real world settings, and the cost associated with treatments.

Evidence-based practice requires that psychologists recognize the strengths and limitations of evidence obtained from different types of research. Research has shown that the treatment method (Nathan & Gorman, 2002), the individual psychologist (Wampold, 2001), the treatment relationship (Norcross, 2002), and the patient (Bohart & Tallman, 1999) are all vital contributors to the success of psychological practice. Comprehensive evidence-based practice will consider all of these determinants and their optimal combinations. Psychological practice is a complex relational and technical enterprise that requires clinical and research attention to multiple, interacting sources of treatment effectiveness. There remain many disorders, problem constellations, and clinical situations for which empirical data are sparse. In such instances, clinicians use their best clinical judgment and knowledge of the best available research evidence to develop coherent treatment strategies. Researchers and practitioners should join together to

ensure that the research available on psychological practice is both clinically relevant and internally valid.

Future Directions

Evidence-based practice in psychology has important implications for research programs and funding priorities. These programs and priorities should emphasize research on:

- Examining psychological treatments of established efficacy in combination with—and as an alternative to—pharmacological treatments
- The generalizability and transportability of interventions shown to be efficacious in controlled research settings
- Patient-by-treatment interactions (moderators)
- The efficacy and effectiveness of psychological practice with underrepresented groups such as those characterized by gender, gender identity, ethnicity, race, social class, disability status, and sexual orientation
- The efficacy and effectiveness of psychological treatments with children and youth at different developmental stages
- The efficacy and effectiveness of psychological treatments with older adults
- Distinguishing common and specific factors as mechanisms of change
- Characteristics and actions of the psychologist and the therapeutic relationship that contribute to positive outcome
- The effectiveness of widely practiced treatments, based on various theoretical orientations and integrative blends, that have not yet been subjected to controlled research
- The development of models of treatment based on identification and observation of the practices of clinicians in the community who empirically obtain the most positive outcomes
- Criteria for discontinuing treatment
- Accessibility and utilization of psychological services
- The cost-effectiveness and cost-benefits of psychological interventions
- Development and testing of practice research networks (PRNs)
- The effects of feedback regarding treatment progress to the psychologist or patient
- Development of profession-wide consensus, rooted in the best available research evidence, on psychological treatments that are considered discredited
- Research on prevention of psychological disorders and risk behaviors

Clinical Expertise²

Clinical expertise is essential for identifying and integrating the best research evidence with clinical data (e.g., information about the patient obtained over the course of treatment) in the

² As it is used in this report, clinical expertise refers to competence attained by psychologists through education, training, and experience resulting in effective practice; clinical expertise is not meant to refer to extraordinary performance that might characterize an elite group (e.g., the top two percent) of clinicians.

context of the patient's characteristics and preferences to deliver services that have the highest probability of achieving the goals of therapy. Psychologists are trained as scientists as well as practitioners. An advantage of psychological training is that it fosters a clinical expertise informed by scientific expertise, allowing the psychologist to understand and integrate scientific literature as well as to frame and test hypotheses and interventions in practice as a "local clinical scientist" (Stricker & Trierweiler, 1995).

Cognitive scientists have found consistent evidence of enduring and significant differences between experts and novices undertaking complex tasks in several domains (Bédard & Chi, 1992; Bransford, Brown, & Cocking, 1999; Gambrill, 2005). Experts recognize meaningful patterns and disregard irrelevant information, acquire extensive knowledge and organize it in ways that reflect a deep understanding of their domain, organize their knowledge using functional rather than descriptive features, retrieve knowledge relevant to the task at hand fluidly and automatically, adapt to new situations, self-monitor their knowledge and performance, know when their knowledge is inadequate, continue to learn, and generally attain outcomes commensurate with their expertise.

However, experts are not infallible. All humans are prone to errors and biases. Some of these stem from cognitive strategies and heuristics that are generally adaptive and efficient. Others stem from emotional reactions, which generally guide adaptive behavior as well but can also lead to biased or motivated reasoning (e.g., Ditto & Lopez, 1992; Ditto et al., 2003; Kunda, 1990). Whenever psychologists involved in research or practice move from observations to inferences and generalizations, there is inherent risk for idiosyncratic interpretations, overgeneralizations, confirmatory biases, and similar errors in judgment (Dawes, Faust, & Meehl, 2002; Grove et al., 2000; Meehl, 1954; Westen & Weinberger, 2004). Integral to clinical expertise is an awareness of the limits of one's knowledge and skills and attention to the heuristics and biases—both cognitive and affective—that can affect clinical judgment. Mechanisms such as consultation and systematic feedback from the patient can mitigate some of these biases.

The individual therapist has a substantial impact on outcomes, both in clinical trials and in practice settings (Crits-Christoph et al., 1991; Kim, Wampold, & Bolt, in press; Huppert et al., 2001; Wampold & Brown, in press). The fact that treatment outcomes are systematically related to the provider of the treatment (above and beyond the type of treatment) provides strong evidence for the importance of understanding expertise in clinical practice as a way of enhancing patient outcomes.

Components of Clinical Expertise

Clinical expertise encompasses a number of competencies that promote positive therapeutic outcomes. These include: a) assessment, diagnostic judgment, systematic case formulation, and treatment planning; b) clinical decision making, treatment implementation, and monitoring of patient progress; c) interpersonal expertise; d) continual self-reflection and acquisition of skills; e) appropriate evaluation and use of research evidence in both basic and applied psychological science; f) understanding the influence of individual and cultural differences on treatment; g) seeking available resources (e.g., consultation, adjunctive or alternative services) as needed; and h) having a cogent rationale for clinical strategies. Expertise develops from clinical and

scientific training, theoretical understanding, experience, self-reflection, knowledge of research, and continuing professional education and training. It is manifested in all clinical activities, including but not limited to forming therapeutic alliances; assessing patients and developing systematic case formulations, planning treatment, and setting goals; selecting interventions and applying them skillfully; monitoring patient progress and adjusting practices accordingly; attending to the individual, social, and cultural context; and seeking available resources as needed (e.g., consultation, adjunctive or alternative services).

Assessment, diagnostic judgment, systematic case formulation, and treatment planning. The clinically expert psychologist is able to formulate clear and theoretically coherent case conceptualizations; assess patient pathology as well as clinically relevant strengths; understand complex patient presentations; and make accurate diagnostic judgments. Expert clinicians revise their case conceptualizations as treatment proceeds and seek both confirming and disconfirming evidence. Clinical expertise also involves identifying and helping patients acknowledge psychological processes that contribute to distress or dysfunction.

Treatment planning involves setting goals and tasks of treatment that take into consideration the unique patient, the nature of the patient's problems and concerns, the likely prognosis and expected benefits of treatment, and available resources. The goals of therapy are developed in collaboration with the patient and consider the patient and family's worldview and sociocultural context. The choice of treatment strategies requires knowledge of interventions and the research that supports their effectiveness as well as research relevant to matching interventions to patients (e.g., Beutler, Alomohamed, & Moleiro, 2002; Blatt, Shahar, & Zurhoff, 2002; Norcross, 2002). Expertise also requires knowledge about psychopathology, treatment process, and patient attitudes, values, and context, including cultural context, that can affect the choice and implementation of effective treatment strategies.

Clinical decision-making, treatment implementation, and monitoring of patient progress.

Clinical expertise entails the skillful and flexible delivery of treatment. Skill and flexibility require knowledge of and proficiency in delivering psychological interventions and the ability to adapt the treatment to the particular case. Flexibility is manifested in tact, timing, pacing, and framing of interventions; maintaining an effective balance between consistency of interventions and responsiveness to patient feedback; and attention to acknowledged and unacknowledged meanings, beliefs, and emotions.

Clinical expertise also entails the monitoring of patient progress (and of changes in the patient's circumstances, e.g., job loss or major illness) that may suggest the need to adjust the treatment (Lambert, Bergin, & Garfield, 2004). If progress is not proceeding adequately, the psychologist alters or addresses problematic aspects of the treatment as appropriate (e.g., problems in the therapeutic relationship or in the implementation of the goals of the treatment). If insufficient progress remains, the therapist considers alternative diagnoses and formulations, consultation, supervision, or referral. The clinical expert makes decisions about termination in timely ways by assessing patient progress in the context of the patient's life, treatment goals, resources, and relapse potential.

Interpersonal expertise. Central to clinical expertise is interpersonal skill, which is manifested in forming a therapeutic relationship, encoding and decoding verbal and nonverbal responses, creating realistic but positive expectations, and responding empathically to the patient's explicit and implicit experience and concerns. Interpersonal expertise involves the flexibility to be clinically effective with patients of diverse backgrounds. Interpersonally skilled psychologists are able to challenge patients in a supportive atmosphere that fosters exploration, openness, and change.

Psychological practice is, at root, an interpersonal relationship between psychologist and patient. Each participant in the treatment relationship exerts influence on its process and outcome, and the compatibility of psychologist and patient(s) is particularly important. Converging sources of evidence indicate that individual health care professionals affect the efficacy of treatment (APA, 2002). In psychotherapy, for example, individual therapist effects (within treatments) account for 5 to 8% of the outcome variance (Crits-Christoph et al., 1991; Project MATCH Research Group, 1998; Kim, Wampold, & Bolt, in press; Wampold & Brown, in press). Decades of research also support the contribution of an active and motivated patient to successful treatment (e.g., Bohart & Tallman, 1999; Clarkin & Levy, 2004; Prochaska, Norcross, & DiClemente, 1994; Miller & Rollnick, 2002).

With the development of interactive electronic technology (e.g. telehealth), many community-wide psychological interventions or other approaches do not necessarily involve direct face-to-face contact with a psychologist. However, these interventions, to be effective, also engage the patient actively in the treatment process, and attend in a flexible manner to individual variations among targeted groups.

The clinical expert fosters the patient's positive engagement in the therapeutic process, monitors the therapeutic alliance, and attends carefully to barriers to engagement and change. The clinical expert recognizes barriers to progress and addresses them in a way consistent with theory and research (e.g., exploring therapeutic impasses with the patient or addressing problems in the therapeutic relationship).

Continual self-reflection and acquisition of skills. Clinical expertise requires the ability to reflect on one's own experience, knowledge, hypotheses, inferences, emotional reactions, and behaviors and to use that reflection to modify one's practices accordingly. Integral to clinical expertise is an awareness of the limits of one's knowledge and skills as well as the recognition of the heuristics and biases (both cognitive and affective) that can affect clinical judgment (e.g., biases that can inhibit recognition of the need to alter case conceptualizations that are inaccurate or treatment strategies that are not working). Clinical expertise involves taking explicit action to limit the effects of these biases.

Developing and maintaining clinical expertise, and applying this expertise to specific patients, entail continually incorporating new knowledge and skills derived from: a) research and theory, b) systematic clinical observation, disciplined inquiry, and hypothesis testing, c) self-reflection and feedback from other sources (e.g., supervisors, peers, patients, other health professionals, or the patient's significant others where appropriate), d) monitoring of patient outcomes, and e)

continuing education and other learning opportunities (e.g., practice networks, patient advocacy groups).

Evaluation and use of research evidence. Clinical expertise in psychology includes scientific expertise. This is one of the hallmarks of psychological education and one of the advantages of psychological training. An understanding of scientific method allows psychologists to consider evidence from a range of research designs, evaluate the internal and external validity of individual studies, evaluate the magnitude of effects across studies, and apply relevant research to individual cases. Clinical expertise also comprises a scientific attitude toward clinical work, characterized by openness to data, clinical hypothesis generation and testing, and a capacity to use theory to guide interventions without allowing theoretical preconceptions to override clinical or research data.

Understanding the influence of individual, cultural, and contextual differences on treatment. Clinical expertise requires an awareness of the individual, social, and cultural context of the patient, including but not limited to age and development, ethnicity, culture, race, gender, sexual orientation, religious commitments, and socioeconomic status (see Patient Characteristics section). Clinical expertise allows psychologists to adapt interventions and construct a therapeutic milieu that respects the patient's worldview, values, preferences, capacities, and other characteristics (Arnkoff, Glass, & Shapiro, 2002; Sue & Lam, 2002). APA has adopted practice guidelines on multicultural practice, sexual orientation, and older adults to assist psychologists in tailoring their practices to patient differences (APA, 2000, 2003, 2004).

Seeking available resources as needed (e.g., consultation, adjunctive or alternative services). The psychologist is cognizant that accessing additional resources can sometimes enhance the effectiveness of treatment. When research evidence indicates the value of adjunctive services or when patients are not making progress as expected, the psychologist may seek consultation or make a referral. Culturally sensitive alternative services responsive to a patient's context or worldview may complement psychological treatment. Consultation for the psychologist is a means to monitor, and correct if necessary, cognitive and affective biases.

A cogent rationale for clinical strategies. Clinical expertise requires a planful approach to the treatment of psychological problems. Although clinical practice is often eclectic or integrative (Norcross & Goldfried, 2005), and many effects of psychological treatment reflect nonspecific aspects of therapeutic engagement (e.g., changes that occur through development of an empathic relationship; Lambert, Bergin & Garfield, 2004; Weinberger, 1995), psychologists rely on well articulated case formulations, knowledge of relevant research, and the organization provided by theoretical conceptualizations and clinical experience to craft interventions designed to attain desired outcomes.

Some patients have a well-defined issue or disorder for which there is a body of evidence that strongly supports the effectiveness of a particular treatment. This evidence should be considered in formulating a treatment plan, and a cogent rationale should be articulated for any course of treatment recommended. There are many problem constellations, patient populations, and clinical situations for which treatment evidence is sparse. In such instances, evidence-based practice consists of using clinical expertise in interpreting and applying the best available

evidence while carefully monitoring patient progress and modifying treatment as appropriate (Hayes, Barlow, & Nelson-Gray, 1999; Lambert et al., 2005; Miller, Duncan, & Hubble, 2005).

Future Directions

Although much less research is available on clinical expertise than on psychological interventions, an important foundation is emerging (Goodheart, in press; Skovholt & Jennings, 2004; Westen & Weinberger, 2004). For example, research on case formulation and diagnosis suggests that clinical inferences, diagnostic judgments, and formulations can be reliable and valid when structured in ways that maximize clinical expertise (Eels et al., in press; Persons, 1991; Westen & Weinberger, in press). Research suggests that sensitivity and flexibility in administering therapeutic interventions produces better outcomes than rigid application of manuals or principles (Castonguay et al., 1996; Henry et al., 1993; Huppert et al., 2001). Reviews of research on biases and heuristics in clinical judgment suggest procedures that clinicians might employ to minimize those biases (Garb, 1998). Because of the importance of therapeutic alliance to outcome (Horvath & Bedi, 2002; Martin, Garske & Davis, 2000; Shirk & Karver, 2003), an understanding of the personal attributes and interventions of therapists that strengthen the alliance is essential for maximizing the quality of patient care (Ackerman & Hilsenroth, 2003).

Mutually respectful collaboration between researchers and expert practitioners will foster useful and systematic empirical investigation of clinical expertise. Some of the most pressing research needs are the following:

- Studying the practices of clinicians who obtain the best outcomes in the community, both in general and with particular kinds of patients or problems
- Identifying technical skills utilized by expert clinicians in the administration of psychological interventions that have proven to be effective
- Improving the reliability, validity, and clinical utility of diagnoses and case formulations
- Studying conditions that maximize clinical expertise (rather than focusing primarily on limits to clinical expertise)
- Determining the extent to which errors and biases widely studied in the literature are linked to decrements in treatment outcome and how to modify or correct those errors
- Developing well-normed measures that clinicians can use to quantify their diagnostic judgments, measure therapeutic progress over time, and assess the therapeutic process
- Distinguishing expertise related to common factors shared across most therapies and expertise specific to particular treatment approaches
- Providing clinicians with real-time patient feedback to benchmark progress in treatment and clinical support tools to adjust treatment as needed

Patient Characteristics, Culture, and Preferences

Normative data on “what works for whom” (Nathan & Gorman, 2002, Roth & Fonagy, 2004) provide essential guides to effective practice. Nevertheless, psychological services are most likely to be effective when responsive to the patient’s specific problems, strengths, personality, sociocultural context, and preferences (Norcross, 2002). Psychology’s long history of studying

individual differences and developmental change, and its growing empirical literature related to human diversity (including culture³ and psychotherapy), place it in a strong position to identify effective ways of integrating research and clinical expertise with an understanding of patient characteristics essential to EBPP (Sue, Zane, & Young, 1994; Hall, 2001). EBPP involves consideration of patients' values, religious beliefs, worldviews, goals, and preferences for treatment with the psychologist's experience and understanding of the available research.

Several questions frame current debates about the role of patient characteristics in EBPP. The first regards the extent to which cross-diagnostic patient characteristics, such as personality traits or constellations, moderate the impact of empirically tested interventions. A second, related question concerns the extent to which social factors and cultural differences necessitate different forms of treatment or whether interventions widely tested in majority populations can be readily adapted for patients with different ethnic or sociocultural backgrounds. A third question concerns maximizing the extent to which widely used interventions adequately attend to developmental considerations, both for children and adolescents (Weisz & Hawley, 2002) and for older adults (Zarit & Knight, 1996). A fourth question is the extent to which variable clinical presentations, such as comorbidity and polysymptomatic presentations, moderate the impact of interventions. Underlying all of these questions is the issue of how best to approach the treatment of patients whose characteristics (e.g., gender, gender identity, ethnicity, race, social class, disability status, sexual orientation) and problems (e.g., comorbidity) may differ from those of samples studied in research. This is a matter of active discussion in the field and there is increasing research attention to the generalizability and transportability of psychological interventions.

Available data indicate that a variety of patient-related variables influence outcomes, many of which are cross-diagnostic characteristics such as functional status, readiness to change, and level of social support (Norcross, 2002). Other patient characteristics are essential to consider in forming and maintaining a treatment relationship and in implementing specific interventions. These include but are not limited to a) variations in presenting problems or disorders, etiology, concurrent symptoms or syndromes, and behavior; b) chronological age, developmental status, developmental history, and life stage; c) sociocultural and familial factors (e.g., gender, gender identity, ethnicity, race, social class, religion, disability status, family structure, and sexual orientation); d) current environmental context, stressors (e.g., unemployment or recent life event), and social factors (e.g., institutional racism and health care disparities); and e) personal preferences, values, and preferences related to treatment (e.g., goals, beliefs, worldviews, and treatment expectations). Available research on both patient matching and treatment failures in clinical trials of even highly efficacious interventions suggests that different strategies and relationships may prove better suited for different populations (Groth-Marnat, Beutler, & Roberts, 2001; Sue, Fujino, Hu, Takeuchi, & Zane, 1991; Gamst, Dana, Der-Karabedian, & Kramer, 2000; Norcross, 2002).

³ Culture, in this context, is understood to encompass a broad array of phenomena (such as shared values, history, knowledge, rituals, and customs) that often result in a shared sense of identity. Racial and ethnic groups may have a shared culture, but those personal characteristics are not the only characteristics that define cultural groups (e.g. deaf culture, inner-city culture). Culture is a multifaceted construct, and cultural factors cannot be understood in isolation from social, class and personal characteristics that make each patient unique.

Many presenting symptoms—for example depression, anxiety, school failure, bingeing and purging—are similar across patients. However, symptoms or disorders that are phenotypically similar are often heterogeneous with respect to etiology, prognosis, and the psychological processes that create or maintain them. Moreover, most patients present with multiple symptoms or syndromes rather than a single, discrete disorder (e.g., Kessler, Stang, Wittchen, Stein, & Walters, 1999; Newman, Moffitt, Caspi, & Silva, 1998). The presence of concurrent conditions may moderate treatment response, and interventions intended to treat one symptom often affect others. An emerging body of research also suggests that personality variables underlie many psychiatric syndromes and account for a substantial part of the comorbidity among syndromes widely documented in research (e.g., Brown, Chorpita & Barlow, 1998; Krueger, 2002). Psychologists must attend to the individual person to make the complex choices necessary to conceptualize, prioritize, and treat multiple symptoms. It is important to know the person who has the disorder in addition to knowing the disorder the person has.

EBPP also requires attention to factors related to the patient's development and life-stage. An enormous body of research exists on developmental processes (e.g., attachment, socialization, and cognitive, social-cognitive, gender, moral, and emotional development) that are essential in understanding adult psychopathology and particularly in treating children, adolescents, families, and older adults (e.g. Toth & Cicchetti, 1999; Sameroff, Lewis, & Miller, 2000; APA, 2004).

Evidence-based practice in psychology requires attention to many other patient characteristics, such as gender, gender identity, culture, ethnicity, race, age, family context, religious beliefs, and sexual orientation (APA, 2000, 2003). These variables shape personality, values, worldviews, relationships, psychopathology, and attitudes toward treatment. A wide range of relevant research literature can inform psychological practice, including ethnography, cross-cultural psychology (e.g., Berry, Kagitcibasi, & Segall, 1997), cultural psychiatry (e.g., Kleinman, 1977), psychological anthropology (e.g., LeVine, 1983; Moore & Matthews, 2003; Strauss & Quinn, 1992), and cultural psychotherapy (Sue, 1998; Zane, Sue, Young, Nunez, & Hall, 2004). Culture influences not only the nature and expression of psychopathology but also the patient's understanding of psychological and physical health and illness. Cultural values and beliefs and social factors such as implicit racial biases also influence patterns of seeking, using, and receiving help; presentation and reporting of symptoms, fears and expectations about treatment; and desired outcomes. Psychologists also understand and reflect upon the ways their own characteristics, values, and context interact with those of the patient.

Race as a social construct is a way of grouping people into categories on the basis of perceived physical attributes, ancestry, and other factors. Race is also more broadly associated with power, status, and opportunity (American Anthropological Association, 1998). In Western cultures, European or white "race" confers advantage and opportunity, even as improved social attitudes and public policies have reinforced social equality. Race is thus an interpersonal and political process with significant implications for clinical practice and health care quality (Smedley & Smedley, 2005). Patients and clinicians may "belong" to racial groups, as they choose to self-identify, but the importance of race in clinical practice is relational, rather than solely a patient or clinician attribute. Considerable evidence from many fields (Institute of Medicine, 2003) suggests that racial power differentials between clinicians and their patients, as well as systemic biases and implicit stereotypes based on race or ethnicity, contribute to the inequitable care that

patients of color receive across health care services. Clinicians must carefully consider the impact of race, ethnicity, and culture on the treatment process, relationship, and outcome.

The patient's social and environmental context, including recent and chronic stressors, is also important in case formulation and treatment planning. Sociocultural and familial factors, social class, and broader social, economic, and situational factors (e.g., unemployment, family disruption, lack of insurance, recent losses, prejudice, or immigration status) can have an enormous influence on mental health, adaptive functioning, treatment seeking, and patient resources (psychological, social, and financial).

Psychotherapy is a collaborative enterprise, in which patients and clinicians negotiate ways of working together that are mutually agreeable and likely to lead to positive outcomes. Thus, patient values and preferences (e.g., goals, beliefs, and preferred modes of treatment) are a central component of EBPP. Patients can have strong preferences for types of treatment and desired outcomes, and these preferences are influenced by both their cultural context and individual factors. One role of the psychologist is to ensure that patients understand the costs and benefits of different practices and choices (Haynes, Devereaux, & Guyatt, 2002). Evidence-based practice in psychology seeks to maximize patient choice among effective alternative interventions. Effective practice requires balancing patient preferences and the psychologist's judgment, based on available evidence and clinical expertise, to determine the most appropriate treatment.

Future Directions

Much additional research is needed regarding the influence of patient characteristics on treatment selection, therapeutic processes, and outcomes. Research on cross-diagnostic characteristics, polysymptomatic presentations, and the effectiveness of psychological interventions with culturally diverse groups is particularly important. We suggest the following research priorities:

- Patient characteristics as moderators of treatment response in naturalistic settings
- Prospective outcome studies on treatments and relationships tailored to patients' cross-diagnostic characteristics, including aptitude by treatment interaction designs
- Effectiveness of interventions that have been widely studied in the majority population with other populations
- Examination of the nature of implicit stereotypes held by both psychologists and patients and successful interventions for minimizing their activation or impact
- Ways to make information about culture and psychotherapy more accessible to practitioners
- Maximizing psychologists' cognitive, emotional, and role competence with diverse patients
- Identifying successful models of treatment decision-making in light of patient preferences

Conclusions

Evidence-based practice in psychology is the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences. The purpose

of EBPP is to promote effective psychological practice and enhance public health by applying empirically supported principles of psychological assessment, case formulation, therapeutic relationship, and intervention. Much has been learned over the past century from basic and applied psychological research as well as from observations and hypotheses developed in clinical practice. Many strategies for working with patients have emerged and been refined through the kind of trial and error and clinical hypothesis generation and testing that constitute the most scientific aspect of clinical practice. Yet clinical hypothesis testing has its limits, hence the need to integrate clinical expertise with best available research.

Perhaps the central message of this task force report, and one of the most heartening aspects of the process that led to it, is the consensus achieved among a diverse group of scientists, clinicians, and scientist-clinicians from multiple perspectives that EBPP requires an appreciation of the value of multiple sources of scientific evidence. In a given clinical circumstance, psychologists of good faith and good judgment may disagree about how best to weight different forms of evidence; over time, we presume that systematic and broad empirical inquiry—in the laboratory and in the clinic—will point the way toward best practice in integrating best evidence. What this document reflects, however, is a reassertion of what psychologists have known for a century: that the scientific method is a way of thinking and observing systematically and is the best tool we have for learning about what works for whom.

Clinical decisions should be made in collaboration with the patient, based on the best clinically relevant evidence, and with consideration for the probable costs, benefits, and available resources and options. It is the treating psychologist who makes the ultimate judgment regarding a particular intervention or treatment plan. The involvement of an active, informed patient is generally crucial to the success of psychological services. Treatment decisions should never be made by untrained persons unfamiliar with the specifics of the case.

The treating psychologist determines the applicability of research conclusions to a particular patient. Individual patients may require decisions and interventions not directly addressed by the available research. The application of research evidence to a given patient always involves probabilistic inferences. Therefore, ongoing monitoring of patient progress and adjustment of treatment as needed are essential to EBPP.

Moreover, psychologists must attend to a range of outcomes that may sometimes suggest one strategy and sometimes another and to the strengths and limitations of available research vis-à-vis these different ways of measuring success. Psychological outcomes may include not only symptom relief and prevention of future symptomatic episodes but also quality of life, adaptive functioning in work and relationships, ability to make satisfying life choices, personality change, and other goals arrived at in collaboration between patient and clinician.

EBPP is a means to enhance the delivery of services to patients within an atmosphere of mutual respect, open communication, and collaboration among all stakeholders, including practitioners, researchers, patients, health care managers, and policy-makers. Our goal in this document, and in the deliberations of the Task Force that led to it, was to set both an agenda and a tone for the next steps in the evolution of EBPP.

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