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Evidence-Based Practice: Evolution, Challenges, and Current Status

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Abstract

Psychological treatment is long-rooted in community-based practices and the general intention of beneficence. However, as science progresses, subjective diagnoses are subject to increased scrutiny due to lack of practical replicability and application. Evidence-based practices (EBPs), known as treatments for illness that exhibit clinical efficacy, are proposed in response to this problem. EBPs aim to provide concrete, research-proven practices to provide better treatment for the mentally ill. While EBPs are often effective, they are not equally implemented by professionals in the field of psychology. This review of the literature examines the field of psychology before evidence-based practices came into existence, their evolution over time, current problems and issues, challenges in implementation, and a future look toward their application. Ultimately, this article provides a resource for teachers, clinical supervisors, scientist-practitioners, researchers, and therapists in the understanding, development, and instruction of this critical part of psychological training and practice.

Keywords: Evidence-based Treatment; Literature Review; Standardized Practice; Scientist-Practitioner

Introduction

Evidence-based practice (EBP) is a frequent topic of interest in the modern world of psychology. EBPs are characterized by the use of treatment methodologies that are empirically supported and are designed to efficiently and correctly treat physical or psychological disorders (Hayes, 2005). While current EBPs are easy to implement and are generally effective in nature, many obstacles exist in incorporating them into therapy. This is due to numerous reasons, including the lack of trained professionals in the subject and subtle adversity from psychologists who do not favor the application of evidence-based practice in treatment. As research continues and EBP implementation into a scientist-practitioner model becomes more prominent, these attitudes may decrease. Overall, it is important to take a holistic approach to understanding the true nature of EBPs by examining its evolution, issues, challenges and current status.

The purpose of this article is to provide a detailed literature review on the birth of evidence-based practice within the nascent stages of psychology and examine its purpose in treatment. It is designed to act as a science-practice training and teaching resource for mental health practitioners, psychologists, clinical supervisors, professors of psychology, researchers, and graduate students. The article is organized into five major sections. First, I chronicle the history and evolution of evidence-based practice. Second, I discuss the activities of modern task forces to develop EBP as a standard of care. Third, I note several scientific efficacy and effectiveness studies that emerged from the task forces to strengthen EBP. Fourth, I highlight the current research and application of EBP in mental health treatment. Fifth, I describe the permeating problems and tensions in EBP that remain notable considerations for scientists and practitioners in EBP implementation and research. The article concludes with a brief reflection on the past development of EBP and notes exciting directions for the future.

Literature Review

The History and Evolution of Evidence-Based Practice

Early Psychological Treatment

In its nascent stages, psychology was characterized by a crude understanding of the human mind and related mental disorders. Treatment plans were sanctioned by dominant society or those in positions of authority, and were often rooted in spiritual traditions or common religious practices. Even famed philosophers debated over the division between the mind and the soul, frequently coming to conflicting or controversial conclusions. For

example, the Pythagoreans, Hippocrates and Plato recognized in their studies that the head was responsible for will power and intellect, some could not isolate it from the concept of a substantialist soul (Baldwin, 1901; James, 1980). This combination of mind, body and spirit most frequently led to treatment plans that would attempt to heal all three factors. Unfortunately, many early physicians and philosophers did not give due credit to mind-related illnesses or approached treatment with any sort of scientifically evidence-based practice.

Early biblical times also document the belief of intricate relationships between spiritual beliefs and now-known psychological disorders. One such common belief involved the assumption that those who suffered from now-known schizophrenia were truly under the influence of a demonic being and should be treated through exorcism and religious care. Stanford (2008) explains that in some religious traditions, the belief that weak faith or sin served as an instigator for poor psychological health has also been prominent in past times. These patterns of beliefs naturally led to many religion-based treatments, and highlighted the earliest positions of mental health healers as priests or shamans. Frank (1974) argues that these roles were found in all cultures, and even mimicked the practice of a modern day psychotherapist. However, a greater emphasis on scientific practices and a larger distinction between the mind and soul were needed in order to create the distinction of psychotherapy from traditional religious healing.

Two official treatment traditions eventually emerged from this religious view. One tradition continued to incorporate a customary spiritual/mystic approach on treating mental disorders, while another tradition stressed a new scientific focus. In primitive cultures, a shaman typically played the role of the psychotherapist by incorporating religious beliefs into treatment styles, known as the “religio-magic” tradition (Reisner, 2005). In more intellectually advanced societies, a scientist would likely take a larger part in diagnosis and treatment of psychological disability. In this naturalistic tradition, the scientist-practitioner would often adhere to empirically validated treatments that had more scientific support for success (Reisner, 2005). The religio-magic tradition and the naturalistic approach often led to differing conclusions and treatment styles, but were both heavily influenced by the predominant features of the cultures in which they were a part of.

The religio-magic and naturalistic traditions also shared important similarities that helped pave the way for stronger evidence-based practices. Although both approaches differed in theoretical foundation, shaman and psychotherapists both used persuasion and

their culturally sanctioned credibility to help the client change and better cope with their environment (Frank, 1974). While a shaman's social power and intellect may have been more closely related to the mystical world than to the scientist's world of practiced knowledge, both traditions used similar processes of therapeutic change and were effective in different ways (Reisner, 2005; Frank, 1974). This bridge between traditions may explain how the naturalistic tradition might have even emerged from the religio-magic tradition due to similar structure. As time progressed, this emergence of the naturalistic, empirical approach to treatment eventually grew in prominence in western society. Through this progression, the call for more evidence-based practice became an important factor within the scientific tradition, creating new opportunities for both research and new empirical techniques.

The "Enlightenment" Era and Birth of Modern EBP

In the United States of America, the transition toward an empirical treatment of mental disorders grew most notably at the turn of the 19th century. This was largely in part due to the popularized concept of moral treatment of mentally ill people, which pervaded much of predominant psychology at the time (Cautin, 2011). For example, ineffective, yet prominent mental health treatments such as bloodletting were eschewed in America at this time due to lack of success, as noted though standardized observation and research. Grob (1966) explains that it was truly the intellectual development at the time that stimulated optimism and empathy for the mentally disadvantaged through the encouragement of naturalistic observation and scientific practice. This age, aptly known as the "Enlightenment" era, grew to reflect scientific knowledge and may even reflect the earliest usage of empirical evidence to support effective mental health treatments by scientist-practitioners.

While psychotherapy and the intellectual "enlightenment" spread throughout American culture, evidence-based practices were far from fully developed in the country. According to Cautin (2011), much of therapeutic practice was comprised of techniques that were heavily biased and disjointed toward the respective practitioner's theoretical beliefs. This suggests that psychotherapeutic practice was frequently motivated by client treatment based on the practitioner's own personal knowledge, the advice of colleagues, or literature that was only immediately available (McKibbon, 1998). Unfortunately, this may have potentially led to a constructivist attitude in American healthcare culture and a dependence on direct observation and tacit knowledge in the treatment of health problems. This belief may have burgeoned in the naturalistic tradition during this time, but gained permanence even after

evidence-based practices came into existence. Indeed, while psychotherapy was making its boldest movement into American society at this time, it still functioned heavily on similar beliefs or treatment patterns of biased, sanctioned healers seen throughout history.

America may have struggled with the incorporation of evidence-based practice into psychotherapy throughout its history, but the concept of EBP was far from a novel concept. According to Hayes (2005), the motivating need for evidence-based practices originated in early western health care with the Greek physician, Hippocrates, and was cultivated from his basic hypotheses. Specifically, Hippocrates' oath of beneficence, or to "to do good/to do no harm," served as the foundation for evidence-based practices. Indeed, as EBPs spread throughout scientific and health related settings, the aim to best treat the mentally ill while avoiding maltreatment or treatment with potentially harmful effects became a key focus.

Hippocrates' oath alone was not necessarily sufficient in ancient times, as having positive ethical intent and basing key treatment judgments on naturalistic observation did not always distinguish theoretically helpful treatment from potentially harmful treatment. Unfortunately, observation and the goal of beneficence were virtually the only utilized methods for treatment of the mentally or physically ill at that time (Hayes, 2005). Beneficence, while well intentioned, could have potentially been perceived as misguided or futile in solving health problems (Frese, Stanley, Kress & Vogel-Scibilia, 2001). Scientists were sometimes forced to reflect as to whether they were aiding or hurting a client when practicing with unproven methods of treatment. Some modern researchers still question as to whether true beneficence was even possible throughout history, especially in ancient times, due to the unclear notions of treatment consequences and lack of practical methodology utilized by scientist-practitioners. However, Hippocrates' quintessential oath ultimately helped pave the way toward EBPs, as it became recognized in mental health society that concrete treatment methods were needed in order to sufficiently carry out proper health care.

Early development of official evidence-based practices first began to emerge in the United Kingdom in the mid-1800s with the help of the acclaimed nurse, Florence Nightingale. Using historical data, or "evidence," Nightingale was able to show that unsanitary hospital conditions were not beneficent, and actually led to deleterious effects and decreased survival rates in patients (Hayes, 2005; Small 1998). Through research, Nightingale revealed a statistically significant number of avertable hospital deaths due to nosocomial infections, or infections due to lack of cleanliness (Hayes, 2005). This eventually led to improved

sanitation in all hospital settings and encouraged a research-focused approach to treating illnesses. Ultimately, Nightingale most notably led the movement toward the use of evidence-based practices through this research on causes, spread, and containment of infectious disease in hospital settings (Hayes, 2005). Once established, Nightingale's scientific approach would become an unstoppable movement in all research and treatment-oriented disciplines.

This pattern of study gradually amalgamated into the distinguished field of epidemiology, which premiered and developed throughout the nineteenth and twentieth centuries. As epidemiology progressed and the concept of EBP began to materialize in structure, treatment effectiveness became a focus. At the turn of the century, American physician Ernest A. Codman sanctioned treatment protocols through the use of applied medical research in randomized controlled trials (RCTs) (Hayes, 2005). RCTs would maturate into an invaluable factor for evidence-based practice efficacy. While Codman's approach was advanced for his time, he was able to lay the foundation for future research patterns, later revisited by a British epidemiologist, A. L. Cochrane. Codman's work most likely influenced Cochrane's research, specifically Cochrane's re-evaluation of mental health services in Britain and his official call for further evidence-based practices (Hayes, 2005). By the mid-20th century, an exciting movement had begun toward evidence-based practice in epidemiology, which quickly gained momentum throughout the discipline and spread throughout other research areas.

Due to the growing establishment of epidemiology, attention turned to the American healthcare field to see if it would be quick to incorporate the growing trend toward evidence-based practices. However, while epidemiology grew to adopt EBPs as a vital pattern of study, such an accumulation of practice was not as readily accepted in American health services. Hayes (2005, p. 5) explains that, "although data or evidence-collection methodologies have been in use for a variety of scientific endeavors for decades, the application of scientific methodology to prove the effectiveness of various medical treatments has been a long time coming," especially in American healthcare. Equal treatment application in American health fields was not as readily applied as other western cultures and fields of study, as evidenced by documented discrepancy in types of health services and general uncertainty of treatment effectiveness in the 1970s (Wennberg & Gittelsohn, 1973). Indeed, an evidence-based approach did not quickly impact American healthcare society and ineffective treatment outcomes were frequently seen.

Modern Task Forces to Develop EBP as a Standard of Care

As time progressed, research disturbingly showed that American healthcare had remained relatively unchanged in regards to the development of evidence-based practices, even in the 1990s (Hayes, 2005). During the previous decades, improper medical use was prominent, specifically with erroneous medication prescriptions. One study revealed that during this time period, only 9.3% of prescriptions written during a two-week time sample were correctly assigned for a relevant presenting condition (Hayes, 2005). While positive progress was assumed, researchers still noted an inappropriate use of health services and treatment application years after this study (Hayes, 2005). In the early 1990s, psychotherapies that had stronger evidence, such as cognitive-behavioral therapy, were also not being utilized as much as therapies with less empirical validation (Goisman, Warshaw & Keller, 1999). While discouraging, the discrepancy between proper, evidence based healthcare and unfounded treatment would eventually serve as a motivating factor for future meetings specifically determined to identify and implement evidence-based practices.

Evidence-based practices became a frequent topic within American mental health culture with the help of psychological Task Forces. The first, and potentially most influential, attempt to introduce EBPs into psychology was initiated by the then-American Psychological Association (APA) president, David H. Barlow, in 1993 (Bruce & Sanderson, 2005). Barlow was responsible for organizing the first Task Force on evidence-based practices with the goal to completely review empirically-supported literature and research in order to find therapeutic interventions that were evidenced to be effective (Bruce & Sanderson, 2005). As a result of this initial Task Force, at least 70 new EBPs were established as successful treatments subject to revision, yet supported by empirical practice. This meeting was also designed to help formulate "probably efficacious" treatment manuals and spread information on how to obtain such manuals (Woody & Sanderson, 1998, p. 1). Overall, this first Task Force showed a much awaited step towards the greater incorporation and discussion of EBPs.

While sincere in its pursuit to better define evidence-based practices, the Task Force was not without scrutiny. Chambless and Ollendick (2001) pointed out that the evidence-based treatments established by the Task Force were not completely proven to be efficacious, the resulting definitions of evidence-based practice were narrow, and the literature review of the resulting report of the Task Force was incomplete. Also, the treatments that were listed as EBPs were noted as "in progress," indicating that supported treatments were not fully

examined, not reviewed, or could potentially perform poorly in future research experiments (Chambless & Ollendick, 2001, p. 691). Criticism was also raised on the agreements on treatment selection, sample description, research design, standardization of treatment, treatment specificity, effectiveness and the focus of treatment (Chambless & Ollendick, 2001). Indeed, the goal of the initial Task Force was noble, but left much of its foundation of evidence-based practice incomplete.

As health care fields progressed, a stronger definition of evidence-based practice that specifically identified techniques in the field of psychology was also needed. This led to the examination of definitions of EBPs in other healthcare fields and how these definitions were being analyzed by differing APA divisions. According to the American Psychological Association (2005b), the definition of EBPs in psychology has been based on the definition set forth by the Institute of Medicine, or the IOM. This IOM definition specifically outlined EBPs to be "the integration of best research evidence with clinical expertise and client values" (DeAngelis, 2005). While this definition was invaluable to the foundation of the forthcoming EBP model in the APA, disagreements and controversy on therapeutic techniques still existed as many APA divisions were developing policies on EBP, but the entire organization had not come to one agreed-upon statement (DeAngelis, 2005). This eventually led to another Task Force, set forth by another president of the APA, Ronald F. Levant.

Levant's recent APA Task Force that focused on evidence-based practices occurred in 2005, which strived to officially define EBPs for all APA divisions. At the meeting, the Task Force specifically agreed that "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" (American Psychological Association, 2005b, p. 1). The ultimate aim of evidence-based practice was also established in the Task Force, which was to promote psychological practices and improve public health services post-examination of empirically-supported evidence (American Psychological Association, 2005a). The Task Force also confirmed that EBPPs were to encourage efficient psychological practice through research-supported assessment, interventions, case formulations, and therapeutic relationships (American Psychological Association, 2005b). This important foundation of the goals and intent for evidence-based practice was another encouraging step towards the greater integration of EBPs into therapeutic techniques and treatment styles.

It is also vital to note the evolution of the meaning and terminology of evidence-based practice from empirically supported treatments. The American Psychological Association (2005b) explains that evidence-based practice is generally more comprehensive than empirically supported treatments (ESTs), the latter of which is best characterized by the utilization of treatments that are best rooted in clinically controlled trials. EBPs, on the other hand, take a more holistic approach on the establishment of treatment and involve procedures using assessment, a therapeutic alliance, and case development (American Psychological Association, 2005b). This approach can help a psychotherapist reach a beneficial conclusion about the evidence-based treatment plan that would best fit a client. EBPs also begin with a focus on the patient and questions as to what evidence exists from research that will help provide best treatment, whereas an EST begins with the application of a treatment and subsequently observing whether it is effective (American Psychological Association, 2005b). Overall, EBPs take many more factors into account than an empirically-based treatment, including research and interpersonal data that can enrich the treatment process.

In addition to concretely establishing a definition of evidence-based practices, the Task Force also outlined important factors underlying clinical expertise. Ultimately, clinical expertise stresses competence in psychologists garnered through academia, life experience, and thorough training, and encourages that true clinical expertise emerge from the training of psychologists as scientists and practitioners (American Psychological Association, 2005b). Clinical expertise itself is more than "mere intuition," and stresses the importance of selecting a treatment option based on more than simple available research (DeAngelis, 2005, p. 26). According to the American Psychological Association (2005a), a psychotherapist demonstrating clinical expertise must demonstrate the ability to run assessments, make clinical decisions, understand interpersonal therapeutic techniques, self-reflect, enact in both the evaluation and application of researched evidence, and strive to understand a client's cultural context and worldview. While an ambitious list, these characteristics of clinical expertise set forth by the Task Force no doubt established the necessary standards for proper psychological treatment and training for growing psychotherapists.

Perhaps most importantly, the 2005 APA Task Force also outlined the importance of considering patient characteristics, values and cultural context in diagnosing and applying an effective evidence-based treatment. According to the APA, client characteristics and values often include presenting problems, personality, inner strengths, willingness to change, level of

functioning, and existing support networks in regards to the client (American Psychological Association, 2005a). By taking these factors into account, treatment may be better studied and applied to diverse individuals. However, DeAngelis (2005) noted that the field of psychology has often overlooked the dearth of research on diverse client groups, especially those of ethnic-minorities. These diverse client groups may include gender, ethnicity, socioeconomic status, gender identity, race, sexual orientation, disability, and comorbidity (American Psychological Association, 2005b). An initiative towards greater research and effective treatment styles of these groups have hence been encouraged in modern psychology, especially on the examination of differing worldviews and ethnocentric bias in evidence-based practices.

Psychological "evidence" was also defined during the Task Force, and was later built upon by other scientific researchers. "Best research evidence," according to the APA Task Force, was derived from clinical research based on statistical and clinical significance, reasonable effect sizes, a wealth of supporting literature and systematic reviews (American Psychological Association, 2005a, p. 1). Yet it is not merely the production of such evidence that constitutes valid EBPs. Wampold (2010) explains that a body of evidence must be synthesized and scrutinized intensely, with the discovery of error serving as an intrinsic movement towards better comprehending and establishing effective methods of treatment. Evidence-based practices are ultimately not top-down, "cookbook" protocol; EBPs truly require a bottom-up approach of treatment application that focuses on the integration of external evidence, patient choice, and clinician experience (Sackett, Rosenberg, Gray, Haynes & Richardson, 1996, p. 72). Ultimately, the APA hopes that researchers will come together to identify effective psychological treatments in order to found a strong library and definition of positive evidence.

This expanded view of evidence is important to the development of EBPs in numerous ways. A Special Task Group of the Society of Counseling Psychology recently recognized that the counseling interventions themselves were abundant and frequently convoluted (Chwalisz, 2003; Wampold, Lichtenberg, & Waehler, 2002). Such interventions have also been deemed dialectic, which led the task group to adopt guided, collaborative and flexible research instructions instead of strict guidelines for practice (Wampold et al., 2002). This emphasis on flexibility in evidence amalgamation and application no doubt had an impact on the structure of EBPs and the types of research utilized in the gathering of useful evidence.

Ultimately this movement helped evidence-based practices to become stronger in structure and avoid extreme rigidity.

Strengthening EBP through Efficacy and Effectiveness Studies

Several of these flexible methods for gaining evidence have been established through therapeutic intervention and etiology. McKibbon (1998) explains that such evidence can be accessed from library databases by specifically looking for RCTs, blind studies, experiments using placebos, cohort studies, and case-control studies. The American Psychological Association (2005b) also outlined clinical observation, qualitative studies, single case experimental designs, systematic case studies, process-outcome studies, RCTs, efficacy research, and meta-analysis as effective methods for measuring EBPs. These popular evidence-building elements have grown to encompass much of the foundation of modern-day evidence, and are becoming the standards to which psychological researchers strive for today. However, efficacy and effectiveness are two important concepts that have emerged from the call for hard research and evidence, with both promising different methods of formulating an evidence-based practice and potential differing levels of efficiency.

Efficacy research is best known as developing from a laboratory setting. In efficacy methodology, therapy is typically structured, executed for a specific duration, and focused on randomized controlled trials (Seligman, 1998). Internal validity is invaluable to efficacy studies as well, which aims to eliminate alternative explanations of research results and consequential evidence (Bruce & Sanderson, 2005). According to Bruce and Sanderson (2005), the most ideal efficacy study would involve a comparison of an experimental treatment group to a control group, the latter of which would duplicate the same design as the experimental group with the exception of the experimental intervention, such as a placebo. Common results of efficacy studies have discovered effectiveness between cognitive, behavioral, and interpersonal therapies and the treatment of various psychological disorders, such as bulimia, agoraphobia, panic, and unipolar depression (Seligman, 1998). Such efficacy research has also revealed selective serotonin reuptake inhibitors (SSRIs) to be effective in treatment as well. Overall, efficacy research aims to reveal a relationship between what is examined in a science-focused, laboratory setting and the real-world of therapeutic practice.

Criticism has been drawn toward efficacy studies due to lack of practical generalization from structured experiments to every-day therapeutic practice. Seligman (1998) explains that the main problem with efficacy research is that it does not accurately

resemble in vivo therapy. Indeed, research suggests it is difficult to accurately apply what is studied in a laboratory setting into actual counseling sessions. It is also seen that the effectiveness of real-life therapy is often underestimated in the laboratory setting, which can lead to a dependence upon treatment styles that are only immediately seen in the lab (Seligman, 1998). This may explain why short-term therapy styles in which results are quickly available, such as cognitive and behavioral therapies, are popular in efficacy studies and resulting evidence-based practices. Also, manuals that frequently result from efficacy studies have been rarely implemented or are sometimes ignored by some practitioners. In one study, roughly 20% of practitioners reported that they had not even thought about using treatment manuals, and about 50% reported uncertainty about what a treatment manual actually was (Addis, 2000). Overall, efficacy studies do not necessarily provide an applicable wealth of knowledge and research to adequately establish a useable evidence-based treatment.

Effectiveness studies approach evidence-based practice differently than efficacy studies, in that they focus on the generalization of real-world therapeutic practices and external validity. This is also known as a "clinical utility" method of practice (Seligman, 1998, p. 2). External validity, or the extent that results can be applied to the greater population that the original sample was drawn from, is an important concept in effectiveness studies as such studies aim to implement experimental techniques that mirror true society rather than laboratory samples (Bruce & Sanderson, 2005). For this reason, concepts such as placebos and random assignment are not necessarily used, as they are not frequently seen in real-world settings (Bruce & Sanderson, 2005). Ultimately, effectiveness studies embody realism as its forte, as it is run "in the field" and can therefore facilitate generalization of researched evidence to true therapy (Seligman, 1998, p. 2). Indeed, case generalization and strength in external validity make effectiveness studies a strong method of gathering evidence for practice.

Effectiveness studies are not without fault, however. While helpful in providing insight on the broad application of therapeutic techniques, effectiveness studies are considerably more expensive, time consuming, and are relatively larger in nature than efficacy studies (Seligman, 1998). It can also fail to reveal whether the observed outcome of the study is of consequence of the specific treatment or is simply due to experiment error or chance. These alternative explanations for treatment results may include poor participant sampling, sample bias or an overall lack of experimental control (Bruce & Sanderson, 2005).

This "experimental control," seen in efficacy studies is typically desired in order to eliminate other explanations for the results. While effectiveness studies generally show greater success rates in patients undergoing psychotherapy, especially long-term therapy that is not observed in a laboratory setting, they still suffer from a lack of a control group, non-existent random sampling, and are frequently poorly documented (Seligman, 1998).

Ultimately a polarity exists between these two types of study, which can be characterized as nomothetic and idiographic styles of practice. The nomothetic method, which is utilized by efficacy studies, is characterized by strict protocol for therapeutic practice and manualization of tested techniques (Seligman, 1998). The idiographic style, on the other hand, is a method in which psychologists base their treatments on a dynamic continuum and on ongoing assessments, and is more frequently seen in field work and effectiveness studies (Seligman, 1998). These two principles, albeit exclusive, both take important approaches to the accumulation of new evidence-based practices. Overall, while both efficacy and effectiveness studies provide helpful methods of gathering evidence for EBPs, both contain useful information, albeit with unavoidable imperfections.

Current Research and Application of EBP in Mental Health Treatment

Thanks to this increase in treatment-related research, application of evidence-based practices is now diverse and has become specialized to particular disorders and cohorts. These issues in evidence-based practice are encouraging for future practice. One such established EBP style involves the treatment of panic disorder. One study reports that cognitive-behavioral therapy for panic disorder was an equally effective evidence-based practice in its efficacy study and in real-world practice, with 87% of clients classified as "panic-free" by the end of treatment (Wade, Treat & Stuart, 1998, p. 237). The effectiveness of this treatment is characterized by changes in feelings, thoughts, and actions, as the therapy itself is designed to target erroneous perceptions of physical and interpersonal surroundings and resulting patterns of behavior (Lyons & Rawal, 2005). Such therapy may also be characterized by exposing the client to anxiety-inducing stimuli or environments. This behavior-focused therapy also holds evidence-based effectiveness and is frequently used with cognitive-behavioral therapy.

It is important to note, however, that while cognitive-behavioral therapy was helpful to those suffering from panic disorder, the researchers who performed CBT in the previously mentioned efficacy study were highly trained and demonstrated extensive competency in

practice (Wade et al., 1998). Professionals who implement cognitive-behavioral therapy in real-life settings are not always so highly trained. Indeed, Wade et al. (1998) note that not all staff were able to adequately learn the techniques needed to appropriately apply the evidence-based practice of cognitive-behavioral therapy to clients with panic disorder. It is therefore vital to note that, while CBT is a commonly accepted EBP, it can vary in effectiveness due to the expertise of the psychotherapist. This stresses the importance of thorough practitioner training when adopting a new evidence-based practice.

Evidence-based practice and protocol has also been suggested for co-morbid mental health disorders with substance abuse. Corrigan, McCracken and McNeilly (2005) state that people with schizophrenia and bipolar disorder are dramatically more likely to have a substance abuse disorder than the overall population. They are also more likely to relapse, be rehospitalized, demonstrate poor professional outcome and present as an overall greater risk of chronic, infectious disease (Haywood et al., 1995; Perkins, Simpson & Tsuang, 1986; Rosenberg et al., 2001; Corrigan et al., 2005). In spite of this problem, those with such "dual disorders" with psychiatric and substance abuse symptoms often have difficulty finding treatment plans that would sufficiently aid both presenting problems (Corrigan et al., 2005, p. 153). In evidence-based practices, both factors in the dual disorder are addressed equally and treated directly.

While there are several established EBPs for the treatment of substance abuse in those with psychiatric disorders, certain methods have become a particular focus to some researchers and research teams. The Managed Care Initiative (MCI), for example, outlined several EBP protocols for treatment of dual disorders. The MCI encouraged the use of phase/stage related interventions, therapy admission criteria designed to endorse acceptance instead of a rigorous screening process, and the abolishment of rigid and formal therapy-related boundaries such as time constraints in dual disorder therapy (Minkoff, 2001; Corrigan et al., 2005). Other research suggests that therapeutic services should also be long-term, culturally sensitive, motivational, empathetic, and involve two-stage interventions (Corrigan et al., 2005). Interventions themselves are invaluable to the treatment process as they can strengthen a therapeutic alliance and help the client identify needed growth areas. While updated research would likely benefit this field of evidence-based practice, an encouraging amount of evidence has already been established, along with treatment direction for practitioners and patients.

Many health disparities exist for seriously disturbed children and adolescents, with potentially 2,000,000 lacking proper health care treatment in the United States (Knitzer, 1982). Research shows that, while many emotionally disturbed children are referred to and often start outpatient therapy, dropout rates are dramatically high and may even be as great as 40% (Lyons & Rawal, 2005). Risk factors for dropping out include low socioeconomic status, younger age, high family tension, minority status and the exhibition of antisocial behaviors both in the family (Lyons & Rawal, 2005). Even families who are provided Medicaid insurance are still at high risk for such drop-out rates. However, several novel EBPs have been developed specifically for children and adolescents, especially in those exhibiting "acting out" behavior, and have even shown decreased dropout rates in therapy and overall greater therapeutic success.

Perhaps the most notable evidence-based practice for emotionally disturbed children and adolescents is multisystemic therapy. Gradually developed by Scott Henggeler, multisystemic therapy (MST) focuses on child/adolescent maladaptive behaviors that may be impacted by negative familial interactions (Lyons & Rawal, 2005). This can lead to diminished coping mechanisms in the child and result in an increased amount of externalizing behaviors. Multisystemic therapy integrates empirically based practices such as CBT, strategic family therapy and behavioral parent training and expands them to fully incorporate the child's family and environment (Lyons & Rawal, 2005). Through this dynamic approach to empirically-based treatment, a family-focused, community-oriented environment has shown to be an effective substitute for hospitalization (Henggeler et al., 1999). In addition to MST, EBP behavioral treatments that are focused on interventions and have a reliable structure/treatment modality are also found to be effective in recent research (Lyons & Rawal, 2005). As more research is gathered on child and adolescent therapy, further developed and improved evidence-based practices are expected in this area.

While these issues and treatment styles in evidence-based practices are encouraging for future clients in psychotherapy, many challenges and controversies also exist in implementing EBPs. Indeed, the fight for identification of evidence-based practice may have been hard won and it is "probably good" that EBPs are attracting more attention, but many practitioners still fail to use evidence-based practice in the field of modern psychology (Stout, 2005, p. 244). Plante, Anderson and Boccaccini (1999) state that modern-day psychotherapists rarely use structured and empirically-based interventions or practice

objectivity in their assessments. This may be due to the extensive amount of efficacy research, the over-representation of cognitive and behavioral EBPs, and an overall lack of proper training in evidence-based practices (Plante et al., 1999). One study even found that dissemination of practice protocol was relatively ineffective in clinicians, indicating that independent practitioners may have been undertreating depression in clinically depressed patients by using methods of practice that were not empirically supported (Azocar, Cuffel, Goldman & McCarter, 2003). However, research suggests that there may be many other challenges that exist in the full implementation of evidence-based practices in a scientist-practitioner model.

EBP as a Policy-Level Intervention

Evidence-based practice is currently influencing modern health care and health policy systems, which has been encouraged by the APA (McKibbon, 1998; American Psychological Association, 2005a). While this is encouraging given the past reluctance to incorporate EBPs into health treatments and organizations, some practitioners are concerned that evidence-based practices will be "…hijacked by purchasers and managers to cut the costs of health care… [which would be] a misuse of evidence based medicine [and be] a fundamental misunderstanding of its financial consequences" (Sackett et al., 1996, p.72). Indeed, a language barrier of sorts may even exist between insurance companies and those endorsing EBPs, yet such communication is of extreme importance to potential clients and practicing psychologists (DeAngelis, 2005). Some insurance companies have also begun to limit healthcare services to only those who practice evidence-based styles of therapy, regardless as to whether sufficient data or access to trained practitioners exist (Bruce & Sanderson, 2005). These issues have cautioned practitioners into adopting a strong affirmative stance on EBP, and as a result, have prevented the benefits of well-established evidence-based practices from shining through.

On a related issue, clinicians may also be concerned about the impact of health care organizations incorporating strict EBP policies into their practice. Practitioners may, in fact, experience anxiety at the thought of being limited in their treatment plans, in that if a patient has a certain disorder, the psychotherapist must provide an EBP procedure, such as CBT, even if they don't feel it is best for the client or it does not align with the practitioner's theoretical orientation (Stout, 2005). If the clinician also isn't a practiced cognitive-behavioral therapist, this creates additional conflict as the therapist may be forced to refer the client or to

commence in the study of CBT even if it is not of particular interest or specialty. However, a polarization has hence formed regarding this fear, as some practitioners feel that the APA should imply strict EBP guidelines and sanctions for psychotherapists who do not adhere to evidence-based practices (Stout, 2005). This schism and growing anxiety are no doubt problematic factors for the future application of EBP.

Training evidence-based practices can also be difficult and costly. According to Stout (2005), many clinicians have difficulty taking time off from practice in order to take education workshops, even ones that are specifically designed on how to implement EBP into clinical work. This time away from work no doubt results in a loss of billable hours and opportunities to be productive (Stout, 2005). Such training sessions may also be national conventions that require travel, accommodations, and workshop costs, which creates more financial strain in addition to time lost from counseling (Stout, 2005). Indeed, pursuing more information on EBPs and how to implement them in practice is not necessarily easy and can potentially cause financial strain, which may subtly push practitioners away from the use of evidence-based practices.

Practitioners have also stated difficulty with the plethora of frequently changing evidence and resulting literature involving EBPs. To some, evidence can be contradictory and enigmatic, constantly evolving, incapable of coming to ultimate conclusions, and with the best evidence still falling short of adequate treatment (Temple, 2002). It is therefore a constant challenge for evidence-based practices to be implemented as the research used by psychotherapists is vacillating and often frustrating. DeAngelis (2005) notes on a great need for a better method of translating research findings for scientist-practitioners due to the extensive amount of relevant literature that likely exists in the field. This highlights the valued use of medical librarians to make new research documents and full-text services readily available for practitioners (McKibbon, 1998). However, research on the improvement of library efficiency is also lagging, and demands for strong research skills is high with current medical librarians (McKibbon, 1998). Such needs are not entirely met in the evidence-based practice community at this time, which may explain why some practitioners fail to research and practice EBPs and why caution is merited in the full and exclusive integration of EBP as a policy-level intervention.

Current Tensions and Considerations in the Application of EBP

Client-Centered Treatment vs. Problem-Centered Treatment

According to the American Psychological Association (2005a), the patient's choice and preferences should be considered in the diagnosis and treatment, but it is ultimately the practicing psychotherapist who makes the definitive call on which treatment plan to utilize. Some practitioners criticize this view, stating the belief that a client's free will is taken away by giving the practicing psychotherapist the power to exert a treatment plan that research shows to be effective (Haynes, Devereaux & Guyatt, 2002). Frese et al. (2001) attempts to alleviate this controversy by hypothesizing that patients who are recovering from a mental illness can take a more decisive stance in their treatment plan than patients who are still mentally or physically incapacitated. This approach creates a hybrid of an EBP approach and a recovery model approach, which is strongly preferred by some mental health professionals (Frese et al., 2001; Stout, 2005). While EBP supporters continue promote evidence-based practice in that allows the client and practitioner to work together in this or other manners, a criticism still persists amongst many anti-EBP psychotherapists that are concerned with the client's free will in treatment.

Some non-supporters of evidence-based practice also possess the tendency to take a depreciatory stance against those who are supportive of EBPs, thus creating a greater divide between the two styles of practitioner. Specifically, some general practitioners have noted that evidence-based practitioners treat "'diseases rather than patients' in a context that [is] perceived as much more controlled that the 'real life' of general practice…[some can be] a bit of an evidence-based mafia" (Freeman & Sweeney, 2001, p. 3). Some are specifically worried about the possibility of making a client feel overwhelmed due to the evidence-based practitioner's own uncertainty in new, fluctuating evidence-based treatments (Freeman & Sweeney, 2001). Indeed, while some practitioners view EBP as insightful and as a practice-altering progress, others express more concern about the instability of the constantly wavering evidence and an extremist approach in practice and diagnosis. This polarization between parties, as previously noted, no doubt creates additional tension in the world of modern health care.

Inconsistent Definition of EBP

The definition of empirical evidence, while officially established by the 2005 Task Force, is still frequently interpreted differently by psychotherapists. Levant (2004, p. 220) notes that "'empirical' is in the eye of the beholder, and sadly many beholders have very narrow lens slits… many for whom 'empirical validation' equates to 'randomized clinical

trial… [and] Slavish attention to 'the manual' [frequently] assures empathic failure and poor outcome.'" This emphasizes the point that while some clinicians favor and support evidence-based practice, to some it is incomplete, lacks empathy and is ultimately an absurdity (Stout, 1995; Levant, 2004). These differing perceptions, again, prevent prominent and consistent application of evidence-based practices, and may even create an awkward tension between clinicians.

Tensions Between Practitioners

Another factor to consider in the lack of utilization of EBPs "in the field of psychology" is the communication between researchers and practitioners. Some researchers note on the miscommunication that is frequently seen between these two parties, creating a tension that could lead to minimal implications and minimal feedback between researchers and psychotherapists (Plante et al., 1999). It is almost as if the two groups have different "languages" reflecting their personal experiences in their respective fields (Plante et al., 1999). One solution would be to organize an additional Task Force with an equal number of clinicians and researchers to help alleviate this problem (Plante et al., 1999). However, it is not clear that recent Task Forces have officially ameliorated this tension. Indeed, communication is a key focus in the field of psychology, yet a lack of it is evident regarding the adequate foundation and application of evidence-based practice.

Some clinicians also do not enact in evidence-based practice due to the kinds of populations most frequently used in the study of EBPs. As noted previously, the APA 2005 Task Force outlined an important focus on understanding a client's cultural background, ethnicity and worldview in practice. While more attention has been paid to these client characteristics and research has increased on the topic, there is still a large deficit in effective evidence-based interventions for diverse populations. Levant (2004, p. 221) states that "empirically-validated [manualized] treatments…have typically been studied using homogeneous samples of white, middle class clients, and therefore have not often been shown to be efficacious with ethnic minority clients." This no doubt makes accurate application to a vast psychological population of clients challenging and brings into question the external validity of certain types of evidence-based practice.

Practitioner surveys also revealed that some clinicians do not study evidence directly, even if it is widely accepted and acclaimed, but instead prefer to study evidence in the context of the presenting patient and the relevant medical situation (Freeman & Sweeney, 2001).

While it is wise to consider such a context during diagnosis, this overlooking of EBPs as a whole leads some practitioners to make "tremendous judgments" in practice (Freeman & Sweeney, 2001, p. 2). Another study revealed that, when given evidence-based procedures and assessment profiles for clients, few practitioners actually used such measures when planning treatment (Garland, Kruse & Aarons, 2003). Such actions are no doubt frustrating to the advocates of EBPs and who strive to make research available to mental health practitioners. This also stresses the concept of tacit knowledge and positivism in non-EBT practitioners during diagnosis and treatment.

Tacit knowledge is an important aspect of any career in a mental health field. It is defined as the "intuition and problem solving ability that is gained through experience and interaction with people" (Lusignan, Wells & Singelton, 2002, p. 624). This knowledge may be spread through seminars of forums, small groups, Task Forces, and individual instruction or mentorship (Lusignan et al., 2002). Lusignan et al. (2002) encourage in this case that health care organizations focus on building clinical teams that may capitalize on the teams' collective knowledge. Through this collective knowledge can potentially help a practitioner to reach a more educated and experienced decisions, and consequently better implement evidence-based practice

While tacit knowledge is prominent in practice, some researchers caution against it. Jeremy C. Wyatt observes that gaps exist in every clinician's working knowledge, which they are often unaware of (Pritchard, 2002). When such a deficit is identified, practitioners cannot afford sufficient time to seek evidence in the area due to the plethora of research and limited time to conduct additional research (Pritchard, 2002). As a result, such clinicians do not utilize libraries of science frequently enough to fill these gaps in knowledge, leading them to depend on incomplete tacit knowledge (Pritchard, 2002). This gap and overreliance on self-knowledge may potentially create errors in treatment and the underutilization of supported evidence in practice. This continues to reinforce obstacles underlying the lack of capitalization of evidence-based practice.

Positivism and EBP

An important argument exists concerning the concept of positivism and evidence-based practice. Chwalisz (2003, p. 499) boldly states that "Counseling psychology's disdain for the medical model and problems with the implementation of the scientist-practitioner model can be traced to a narrow conceptualization of science rooted in positivist psychology."

Positivism, which rests on the assumption that an objective reality is potentially observable, has indeed caused controversy amongst scientists-practitioners.

According to Chwalisz (2003) positivism is simply not complex enough for all practitioners to capture the vastness of psychological phenomena. To align with such a concept could potentially limit psychology in knowledge and practice, and has even been questioned in other science-related disciplines. However, the usage of positivism may be the only option in some cases. Many alternative methods and models of evidence are currently elusive to researchers and practitioners, perhaps leading to a frequent exclusivity of evidence-based models that are generated through positivism. Such observations are troubling, as an extreme positivist approach may cause a greater split between researchers and practitioners, as well as pro-EBP practitioners and anti-EBP practitioners. Overall, some researchers show an adamant stance against the positivist approach.

Chwalisz's argument was not met without criticism, however. Bruce E. Wampold (2003, p. 544) explained that he "… see[s] absolutely no reason that adopting an evidence-based approach has to find a culprit in 'positivist psychology.'" Wampold also scrutinizes Chwalisz's statement regarding contempt for the medical model by counseling psychologists due to their narrow view caused by positivist science. Wampold (2003, p. 542) stresses that "disdain" for the medical model is a poor choice of words and does not accurately describe the general attitude of psychotherapists towards the model. He also explains that Chwalisz's definitions of positivist psychology are not clear, and therefore he cannot completely agree with her view of positivism expressed in her article (Wampold, 2003). This argument no doubt deserves more attention and research in the future.

Overall, these criticisms are important to understanding the complexity and prevalence of evidence-based practice. A divide is undoubtedly seen between some researchers regarding EBP, and communication between parties is not always clear. However, progress has undoubtedly been seen in the field and closer steps have been taken to the discovery and implementation of more effective evidence-based practices, especially with the help of APA Task Forces. Specific EBPs are now seen for many disorders, including disorders in children and adolescents or those who suffer with a comorbid mental impairment and substance abuse disorder. While a balance is needed between efficiency and effectiveness research, both provide promising results to better understanding EBPs and how to treat psychological illnesses.

Conclusion

In conclusion, it is wise to reflect on the progression of psychology and evidence-based practice since its first manifestation in ancient times. While practitioners in the past once relied upon religion and folk treatments to care for those who were mentally ill, psychotherapists now utilize research and scientific practices in a naturalistic tradition. Such methods of practice have undeniably burgeoned both in popularity and wealth of knowledge. Now, modern-day graduate students are being trained as scientist-practitioners, suggesting that the future of psychology will continue to grow in a scientific focus. Indeed, the future holds exciting and optimistic implications for further understanding and the potential discovery of novel evidence-based practices, which will no doubt greatly influence the field of psychology.

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