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Evidence-Based Practice in the Area of Substance Abuse

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You probably abuse substances such as alcohol and other drugs. A dictionary in our office provides one definition of abuse as "To use so as to injure or damage." By this standard, the hangover following excessive alcohol consumption indicates abuse. Actually, when one of the authors (Thyer) has more than just a couple of drinks, he gets a headache. Abuse. On several occasions during his lengthy life, he has ingested so much alcohol that he became physically sick to his stomach. Abuse. Other similar episodes could be presented, but you get the point. Many of us abuse some sort of substance on occasion, but for most of us, this abuse does not cause significant difficulties in our interpersonal relationships, our ability to work, or to otherwise negotiate the demands of life. For some individuals however, their use of substances rises to the level of abuse to such an extent that significant problems do emerge. The nosology (e.g., scientific classification) of substance abuse problems is an arcane art, incorporating much myth, clinical lore, and a modest amount of credible research. We can quibble about the distinctions among terms such as abuse, dependence, addiction, disorders, and the like. How client functioning and problems related to substance abuse are described will not be satisfactorily resolved in the near future, so in this chapter, and elsewhere in the volume, a variety of terms and classifications will be employed. Which are the 'best' or most 'accurate' is not for us to say. We are confident in presuming that people do develop problems related to substance abuse. We are less confident in asserting which language or terms used to describe these problems is the closest to nature's truth. Just like Pluto exists, regardless of whether or not astronomers agree on calling it a planet, so too do substance problems exist. Distance exists in nature, but

how we measure it—miles, kilometers, cubits or furlongs—are conventions arrived at by human beings. So does time exist. Time marches on and pays no attention to the national shifts back and forth from daylight savings time, or whether our clocks read in 12 hour or 24 hour increments, or if the Pope decrees a shift in the calendar.

We do believe that individuals providing substance abuse counseling, prevention, and treatment services, should be familiar with the most common language and terms used to define substance abuse, and this language is found in the fourth edition, text revision, of the *Diagnostic and Statistical Manual of Mental Disorders (*American Psychiatric Association, 2000). A few of the more common terms are reproduced in Table 1.1. Most so-called diagnoses are grouped by specific substances (alcohol, cocaine, amphetamine, caffeine, cannabis, etc.), with various subtypes involving intoxication, abuse, dependence or withdrawal, and full or partial remission. Keep in mind, these classifications are agreed upon conventions, like how we categorize objects in space, time, or distance. Each new edition of the DSM brings many changes, but the problems themselves are not altered. There are also alternative nosological systems, such as the *International Classification System of Diseases,* each with its own merits and flaws. However it makes no sense to claim that we have squared the circle and arrived at a complete and accurate classification scheme for any of these approaches. The DSM is the most widely used system, which is why we highlight it here.

In this volume we have collected some readings which we judge to represent fairly sound contemporary research on the topics of assessing and treating individuals with substance abuse problems, and on policy applications of such research. We have done this to further what can be generally labeled as the approach called evidence-based practice, a model of practice in the human services that very explicitly is grounded, in part, on such research findings. It is important at this point to present the evidence-based practice model, so we are clear from the outside what this approach entails.

Table 1.1 Common Terminology Used in the Field of Substance Abuse as Defined in the *Diagnostic and Statistical Manual of Mental Disorders* (APA, 2000).

- "Substance Abuse is a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances . . . There may be repeated failure to fulfill major role obligations, repeated use in situations in which it is physically hazardous, multiple legal problems, and recurrent social and interpersonal problems." (p. 198)
- "Substance Dependence is a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern or repeated self-administration that can result in tolerance, withdrawal, and compulsive drug-taking behavior." (p. 192)
- "Tolerance is the need for greatly increased amount of the substance to achive intoxication (or the desired effect) or a markedly diminished effect with continued use of the same amount of the substance." (p. 192)
- "Withdrawal is a maladaptive behavioral change, with physiological and cognitive concomitants, that occurs when blood or tissue concentrations of a substance declined in an individual who maintained prolonged heavy use of the substance. After developing unpleasant withdrawal symptoms, the person is likely to take the substance to relieve or avoid those symptoms." (p. 194)

Evidence-Based Practice: What It Is

The evidence-based practice model emerged in the early 1990s from the field of medicine. It was made possible through the emergence of a number of concurrent developments, including the rise of email and Internet, which greatly speeds up communication and the dissemination of new research findings; the rapid development of empirically-based approaches to assess and treat clients with much greater effectiveness than in the past; and an increasing sense of professional accountability, an ethical awareness that to some extent, we as professionals have an obligation to offer clients as first-choice options, methods of assessment and treatment which are more likely to help them (Myers & Thyer, 1997).

The EBP model was first comprehensively outlined in the little book *Evidence-Based Medicine: How to Practice and Teach EBM* (Sackett, Richardson, Rosenberg, & Haynes, 1997), now in its third edition (Straus, Richardson, Glasziou, & Haynes, 2005). Anyone wishing to be informed on what EBP really is should read this volume first. It is not wise to rely on third, fourth or fifth hand regurgitations. For example, Webb (2001) presented the first article discussing EBP in the prestigious *British Journal of Social Work*. Unfortunately he failed to cite a single primary source from the EBP literature in his misguided critical analysis. The only quote he had was from a webpage of a British organization. He then proceeded to mischaracterize the entire EBP process with a series of straw man attacks. The best protection against absorbing straw-man portrayals of EBP is to read primary sources yourself.

Here is an accurate definition of EBP: EBP " . . . requires the integration of the best research evidence with our clinical expertise and our patient's unique values and circumstances' (Straus et al., 2005, p. 1). Additional definitions go on to describe best research evidence as valid and clinically relevant research, clinical expertise means one's ability to use our clinical skills and past experience in our working with new clients, patient values refer to the unique preferences, concerns and expectations clients bring to us, and circumstances involve the individual's clinical state and the service setting. The process of EBP consists of five steps (from Straus et al., 2005, pp. 3–4):

1. Convert our need for information into an answerable question (see Gambrill & Gibbs, 2009, for a social work perspective on this step).
2. Track down the best available evidence pertaining to answering that question (see Rubin & Parrish, 2009).
3. Critically evaluate the evidence we locate in terms of its validity and applicability to our client (see Bronson, 2009).
4. Integrate this critical appraisal with our clinical expertise and our client's unique values and circumstances (see Gambrill, 2009).
5. Evaluate our effectiveness and efficiency in completing steps 1–4 (see Thyer & Myers, 2007, 2009).

Note that locating and applying research evidence is one critical piece, but this is not to accord more importance than the other critical features, such as clinical skills, or the client's values and preferences. And of course, in common with all good practice, professional ethics inform our decisions as well. The recent edition of the *Social Worker's Desk Reference* (Roberts, 2009, pp. 1115–1182) now includes a special section on EBP as it applies to social work, and is an excellent resource that was edited for its general adherence to the original EBP model. The literature on EBP does tend to focus on more of the research issues related to this topic, since these are often accorded considerably less attention in the educational curricula of the human service professions. These emphasize the acquisition of clinical skills, socialization in one's field, professional ethics, and not much on the utilization of meta-analyses versus randomized

controlled trials, hence the EBP literature tries to fill this gap.

This process of reviewing the pertinent high quality research literature bearing on your answerable question can be conducted using either a bottom-up or top-down approach. In the bottom-up approach, the individual social worker personally searches the literature, retrieves relevant studies, carefully reads them, critically appraises their methods and conclusions, and arrives at a judgment about the answer (e.g., Does research evidence suggest that a given treatment is effective? Does research evidence suggest that a given assessment method is clinically useful and psychometrically sound?). While this can be a time-consuming process, once completed for a particular question (e.g., Does assertive community treatment better help prevent relapse, compared to standard care, among persons diagnosed with schizophrenia?'), future updates will be less demanding of time and effort.

An alternative to this approach is to seek out well-crafted systematic reviews completed by competent research terms and see what they have concluded. There are two major organizations explicitly devoted to this process of preparing systematic reviews about the types of answerable questions formed as a part of the EBP process. The first is known as the Cochrane Collaboration (www.cochrane.org) and focuses on the preparation of systematic reviews in the broad area of health care, and the second is the Campbell Collaboration (www.campbellcollaboration.org), with a focus on social welfare, criminal justice, and education. If you go to these websites you will find comprehensive handbooks on the methodologies used to

Table 1.2 Selected Systematic Reviews on Substance Abuse Treatment Available through the Cochrane Collaboration (www.cochrane.org) and Campbell Collaboration (www.campbellcollaboration.org). There are many additional completed reviews. This list is just a sampling.

From the Cochrane Collaboration
• Alcoholics Anonymous and other 12-Step Programmes for Alcohol Dependence
• Auricular Acupuncture for Cocaine Dependence
• Case Management for Persons with Substance Disorders
• Interventions for Drug Using Offenders in the Courts, Secure Establishments and the Community
• Primary Prevention for Alcohol Misuse in Young People
• Interventions for Prevention of Drug Use by Young People Delivered in Non-School Settings
• Psychosocial Interventions for Cocaine and Psychostimulant Amphetamines Related Disorders
• Psychosocial Interventions for Women Enrolled in Alcohol Treatment During Pregnancy
• Therapeutic Communities for Substance Related Disorder
• Psychosocial Treatment for Opiate Abuse and Dependence
From the Campbell Collaboration
• Incarceration-Based Drug Treatment: Effectiveness on Criminal Behavior
• Street-Level Drug Law Enforcement

develop systematic reviews, and these represent about the highest quality standards to be found anywhere on the preparation of systematic reviews. Of even greater value, is the posting of several thousand (Cochrane) and over 50 (Campbell) completed systematic reviews. Thus, if you as a practitioner can locate a completed systematic review that really does pertain to the answerable question you are seeking answers for, this can be an immense savings of time. Table 1.2 lists a few examples of completed systematic reviews to be found on the Cochrane and Campbell websites pertaining to substance abuse. There are many more, and the reader is urged to regularly consult this evolving and updated resource. These can be a great savings of time and effort in completing that aspect of the EBP process dealing with locating and critically appraising relevant research studies. If you are fortunate to find a relevant systematic review, it is enough a good idea at that point to undertake an updated review on your own of work published since the systematic review you located was posted.

Evidence-Based Practice: What It Is Not

Evidence-Based Practice Does Not Tell Social Workers What to Do

Evidence-based practice does not provide practitioners with lists of so-called *approved* assessment methods or interventions from which you are expected to select.

Keep in mind that EBP represents the process of *integrating* the best available scientific findings *with* other equally important factors such as acceptability to clients, ethical appropriateness, your own clinical expertise, feasibility and time constraints, and so on. Thus the *process* of EBP is violated by any intimation that you are engaging in EBP if asked to choose treatments from any kind of listing. The very idea is absurd. For example, suppose it were scientifically proven that amputating the hands of thieves exerted a deterrent effect on crime among the general population. Despite any scientific support this intervention would have, in contemporary North America the ethical objections to such an approach would deem it an unsuitable option. Or suppose (and this is true) that cognitive-behavior therapy has been shown to be a pretty effective intervention for clients suffering from major depression. This may well be true, but if your client has a developmental disability, s/he may not possess the intellectual requisites needed to effectively engage in this form of treatment, and CBT would not be a first choice treatment for him/her, regardless of what any 'list' of effective treatments may indicate.

Hopefully readers of the present chapter and of primary sources on the EBP model, will not be deceived by misrepresentations such as those of Webb, when he erroneously claimed "According to this view, social work decisions should rest solely on evidence leading to effective outcomes." (Webb, 2001, p. 62).

Also, some practitioners confuse the development and propulgation of practice guidelines (PG) with the EBP movement. These are two distinct initiatives, and the use of PGs are nowhere to be found or advocated within the primary EBP literature. Practice guidelines are:

> " . . . recommendations for clinical care based on research findings and the consensus of experienced clinicians with expertise in a given practice area. Practice protocols, standards, algorithms, options, parameters, pathways, and preferred practice patterns are nuanced terms broadly synonymous with the concept of *clinical practice guidelines.*" Howard & Jensen, 1999, p. 285, emphasis in original)

Practice guidelines *do* tell clinicians what to do. Have a client who meets the criteria for Bipolar Disorder? Then consult, for example, the American Psychiatric Association's practice guideline on this topic. These are eschewed in EBP because

EBP is a process to aid in helping clinicians make decisions, but it does not directly tell them what to do. Also, practice guidelines, unlike systematic reviews, typically contain a strong element of clinical consensus, something EBP tends to avoid.

Evidence-Based Practice Is Primarily a Managerial Tool

EBP is not a tool for managers to cut costs. In fact, by engaging in the EBP process it may emerge that first choice treatments to help clients may turn out to be *more* expensive than the conventional methods of therapy. EBP did not emerge at all from the ranks of administrators and managers; it arose from the combined efforts of an international group of clinicians and researchers, with plenty of consumer input.

Evidence-Based Practice Is Simply Disguised Behaviorism

EBP is not derived from behaviorism, contrary to Webb's assertion that EBP leads to "... an evidence-based infrastructure derived solely from a behaviourist worldview and an empirically generated methodology." (2001, p. 60). Behaviorally-oriented professionals had very little to do with the development of EBP, which, as stated earlier, originated in the field of medicine. As it turns out, behavioral practices may well be represented among the approaches which practitioners select, but this is a function of their research support and ethical appropriateness, not some sort of epistemological hegemony. Quite literally *any* approach to social work services can be promoted within the EBP process.

There is Not Enough Evidence in Social Work to Apply Evidence-Based Practice

Another misconception is that social work lacks a sufficient body of solid evidence to be able to apply the EBP process. This misconception is based on the idea that only the highest quality scientific evidence can be incorporated into the process of choosing assessment methods and interventions. The reality is that EBP encourages the practitioner to locate and critically evaluate the very best *available* evidence. It only makes sense that if an approach is rejected by several high-quality published randomized controlled studies, by a well-conducted meta-analysis or a Cochrane Systematic Review, that such evidence will be accorded greater weight than several anecdotal case histories described by colleagues over the dinner table. But if no systematic review, meta-analyses, or randomized controlled trials are available, then the best evidence may be quasi-experimental studies. If these are not available, then the best evidence may be pre-experimental studies. The practitioner continues to drill down through searching the literature, in keeping with the EBP principle of locating the best *available* knowledge. At the lower end are sources such as single-subject designs, narrative case histories, qualitative studies, theory, or informed clinical opinion. But there is *always* evidence to consult, even if it is to be found at the lower end of the hierarchy.

It is unwise to assume that little or no evidence exists regarding the answers to the practice question relevant to your clinical situation until you have completed a thorough electronic review of the literature. Such a search increasingly is feasible via university and public library Internet portals. Table 1.2 lists a sampling of completed systematic reviews addressing substance abuse which you can download from the website of the Cochrane Collaboration. Interested in alcoholism? The review on the effectiveness of AA will surely be of interest. Interested in prevention of alcohol misuse among the young? There is a systematic review of such interventions on that topic as well. Psychosocial treatments for cocaine abuse? That is covered in Cochrane as well.

Evidence-Based Practice is Only Applicable to Clinical Services

You may believe that EBP is only applicable to clinical practice, and since you engage in macro, administrative or policy practice that this new model has little relevance to you. You may believe that but you would be wrong. There is large and exponentially growing literature on the applications of the EBP model, with adaptations, to macro-level practice (see Thyer, 2008, for a recent review). A search of the phrase "evidence-based government" will turn up a surprising amount of literature, which largely seems to have escaped the attention of academic social workers. The September 2003 issue of the *Annals of the American Academy of Political and Social Science* was devoted to the topic of evidence-led policy, with Sherman's (2003, p. 226) essay titled *Experimental Evidence and Governmental Administration* suggests that " . . . there is a growing nonpartisan interest, across the range of ideologies, in gaining better evidence about achieving results in the private sector." He asserts that "If we stop viewing government as a contest between two sides claiming to have the best capacity to govern, and start to view it as a matter of learning what works to solve problems, we may stop rewarding good luck and start rewarding good practice." (Sherman, 2003, p. 228). This experimentalist sentiment was echoed by President Obama in his inauguration speech:

"The question we ask today is not whether our government is too big or too small, but *whether it works*—whether it helps families find jobs at a decent wage, care they can afford, a retirement that is dignified. Where the answer is yes, we intend to move forward. Where the answer is no, the programs will end." (Barack Obama, 20 January 2009).

The September 2008 issue of the *Journal of Evidence-Based Social Work* was devoted to the applications of the EBP model to macro-level social work practice, and its articles cover topics such as organizational and community practice, neighborhood-based work, university-community partnerships, and other domains. In short, the principles of the EBP process have application at all levels of social intervention, from assessing the individual drug abuser, to establishing drug abuse prevention programs, to creating national policies for health and social care. EBP is more developed at the clinical level, but corresponding applications at the macro level are expanding rapidly.

Evidence-Based Practice Supports a Cookbook Approach to Social Work

It has been contended that EBP promotes a cookbook-like approach to service delivery. A cookie-cutter approach to practice tends to apply one intervention promiscuously to different clients with a wide array of problems (e.g., insight-oriented psychotherapy, Alcoholics Anonymous). Since each client presents with a different constellation of values and preferences, and EBP requires that these be integrated into decision making, each client is freshly appraised, and individualizing the assessment and treatment process is actually enhanced through use of the EBP process model (see Straus, 2002).

EBP is not business as usual. It is not usual for social workers to routinely consult the highest quality available research to assist them in making important practice decisions with their clients. Doing so will require the acquisition of new literature search skills. A good search does not consist of perusing the latest issue of *Social Work* or even of *Research on Social Work Practice.* It requires access to major electronic databases such as PsycINFO or Web-of-Science, and skills at selecting the most relevant search terms and inclusionary and exclusionary criteria. You may not have been taught this in graduate school. If not, then Straus et al. (2005) and Rubin and Parrish (2009) will be good professional reading for you. You may not have been taught very

much about how to critically evaluate high quality and sophisticated studies. If not, then to become truly adept at EBP you must acquire these skills. Bronson (2009) should be next on your reading list. And you may learn that certain psychosocial interventions are particularly useful for helping clients like those you often see in your practice. In which case you will need to learn these new skills, via continuing education programs, conference workshops, or institutes. This may all be quite new and represent a lot of work on your part. Welcome to the world of evidence-based practice.

Summary

The process of EBP practice has a good deal to offer practitioners, agency administrators and policy-makers about effective prevention, assessment, and intervention in the field of substance abuse. There is already a large and growing literature on the topic, covering both prevention and treatment (e.g., Eliason, 2007; Emmelkamp & Vedel, 2006; Haug, Shopshire, Tajima, Gruber, & Guydish, 2008; Leukefeld, Gullotta, & Staton-Tindall, 2009; Waldron & Turner, 2008). EBP has been widely adopted at the federal level, whose agencies are vigorously promoting it (e.g., Squires, Gumbley & Storti, 2008). The articles comprising the balance of this book reflect readings which, we believe, exemplify some of the better approaches to psychosocial research in this important domain. Such research findings are an important, but not sole, component of undertaking EBP. It is too soon to claim at EBP is going to revolutionize substance abuse prevention and treatment services but it is certainly one of the more promising developments to have occurred within the past several decades.

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