Chapter 3
The Steps of Evidence-Based Practice in Clinical Practice: An Overview

The evidence-based medicine [EBM] and evidence-based practice [EBP] movements follow the overall goals of Dr. Archibald Cochrane, who sought to increase the use of effective treatments while reducing the use of ineffective or harmful treatments. In addition, EBP is usefully understood via three different perspectives in the social work and allied professional literatures. As such, the focus of EBP discussion will differ based on the perspectives of (1) clinical practitioners, (2) researchers, and (3) funders or program administrators. While these different audiences all are key parts of the EBP movement, their specific purposes and uses of evidence vary widely.

Many summaries of EBP begin by defining the steps of EBP as it applies to direct clinical practice. In turn, most clinical social workers view EBP as a set of steps that help structure treatment planning and decision-making. Out of context, these seemingly structured steps of EBP decision-making may feel like an imposition on professional expertise and autonomy. Their intent, however, is to help clinicians include the best available research knowledge as one part of their clinical decision-making process. In the contemporary model of EBP, the client's clinical state and circumstances, research knowledge, and the client's own values and interests are all integrated using the clinical expertise of the social worker. The steps of EBP help guide and orient the use of research knowledge in clinical practice, but do not simply determine clinical choices. In other words, the EBP process will not automatically lead the clinician to one clearly discernable "right" answer. Clinicians must navigate through and incorporate many pieces of information for each client they serve. They must use their professional expertise and judgment to determine how best to weigh the various available clinical and research information. The client collaboratively guides and shapes the treatment plan.

It is important to keep in mind that the EBP model has been applied to other aspects of practice besides choosing treatments. It may also be used to select among preventive interventions or to examine the etiology or origins of medical disorders. In medicine and psychology, EBM/EBP is also applied to the selection of differential

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diagnostic tests and procedures. In medicine, it is used to examine the prognosis or course of an illness, including survival rates over time. In administration and finance, the EBP model is even applied to economic decision-making (Oxford Center for Evidence-based Medicine, 2009, 2016). The EBM/EBP research approach can be applied to decision-making in many areas of professional practice and practice management. Our focus in this chapter will be on using EBP as a practice decision-making process in clinical practice.

The Six Steps of EBP in Clinical Practice

The steps of the EBP practice model guide practice decision-making. These steps must always be based upon a thorough assessment of the client and the client's circumstances (Grady & Drisko, 2014). The assessment process allows the clinical social worker to learn both the foreground and background needs of the client. (Assessment will be the focus of the next chapter in this book.) Foreground needs usually become the priorities of interventions, while background needs provide context that may influence if, and how, treatment is likely to proceed. In all cases, the intervention plan generated by the clinical social worker must be discussed collaboratively with the client to determine if the plan is understood by the client, is acceptable to the client, is seen as appropriate given the client's circumstances, and is likely to be effective. Clinical expertise is applied to determine if the plan is feasible and includes all relevant factors.

Combining research knowledge, client needs and preferences, and professional expertise starts with the identification of a priority practice issue and then moves through a sequence of steps. Scholars vary in the number of steps they name in the EBP process, but the core ideas do not vary.

The steps of the EBP practice decision-making process are:

1. Drawing on client's needs and circumstances learned in a thorough assessment, identify answerable practice questions and related research information needs.
2. Efficiently locate relevant research knowledge.
3. Critically appraise the quality and applicability of this knowledge to the client's needs and circumstances.
4. Actively and collaboratively discuss the research results with the client to determine how likely effective options fit with the client's values, preferences, and culture.
5. Synthesizing the clinical needs and circumstances with the choices of the client and the relevant research, develop a plan of intervention considering available options.
6. Implement the intervention.

Note that these steps make the use of research results as a key part of practice decision-making. This is a clear goal of EBP. Note carefully that the needs, values,

and culture of clients are also actively included and may have precedence over research findings. Clinicians, therefore, must constantly consider how to understand the research findings given the unique situation of the client and how much of the research can be applied to that particular client, given the client's unique presentation and context in which treatment will take place.

How Practice Evaluation Links to EBP

A few authors add a seventh step to the EBP process (Gibbs, 2002). This additional step is to evaluate the effectiveness of the delivered intervention(s). We view monitoring and evaluation as an integral part of all good professional practice. We do not, however, view it as a part of the EBP process because it draws upon a very different research logic than does most of the EBP model. Practice evaluation is about determining the effectiveness of a treatment for one specific client, while the research model of EBP draws on the average results of research across a large group of clients or patients. Single-case evaluation studies may be included in EBP research, but in the published literature, this is very rare. Still, evaluating the effectiveness of an intervention is an important part of good practice and should always be undertaken. Yet, single-case studies are simply different in research design and purpose than is the core focus of EBP research as applied in the practice decision-making process. We will discuss practice evaluation further in Chap. 10.

The six steps of EBP define the EBP practice decision-making process. Each step has a slightly different focus, but all demand specific—and different—kinds of professional expertise. Client input from assessment serves to start and later to refine the EBP process. Research results substantiate the likely impact of intervention options. Active collaboration with the client allows expression of concerns and interests. This helps build a therapeutic alliance and ensures that the client is an active player in treatment planning. Integrating all these elements is the professional expertise of the clinical social worker. To more fully explore the EBP process, it is worth looking at each of its several steps in greater depth. Each step will also be further examined in later chapters of this book.

Step 1: Drawing on Practice Questions, Identify Research Information Needs in a Thorough Assessment

To begin the EBP process, the clinical social worker must identify key practice concerns in interaction with the client. Note carefully that the EBP model is silent on just how these practice concerns are identified (Grady & Drisko, 2014). Typically, such concerns are identified through the intake and assessment process. What constitutes a good enough client assessment, however, is not stated. It is simply assumed

that professional practitioners will be able to make such an initial assessment. Indeed, good assessment is the foundation of the optimal use of EBP (Goodheart, Kazdin, & Sternberg, 2006; Grady & Drisko, 2014). The pivotal role of a good assessment—the foundation of using EBP in practice—is left to the professional knowledge and expertise of the clinical social worker.

The clinical social worker must carefully and thoughtfully determine what problems and needs are the priorities for a specific client in a specific set of social circumstances. The EBP model assumes that the clinical social worker can make such assessments and has an institutional support system that allows careful and thorough assessment to be completed. In contemporary practice, many agency and funding influences may make a thorough assessment difficult to complete. Financial and time pressures may limit assessment to a single session with no other corroborating input. Still, making a good choice about the client's priority needs is vital to applying the EBP model successfully. Professional expertise is very important to its proper and successful application in practice.

One area in which clinical social workers may take a different stance than do other mental health professionals is the importance of social context. While clinical social workers often draw on the American Psychiatric Association's (2013) *Diagnostic and Statistical Manual* [DSM] as a resource for defining mental health problems, we social workers also pay considerable attention to contextual factors (Kutchins & Kirk, 1988; Turner, 2002). These may include whether basic concrete needs for food, housing, and medical care are available, if neighborhood and social supports for education and employment are adequate, and whether family and community supports are sufficient to encourage and sustain change. While clinical intervention may not be able to alter large-scale social circumstances, it strongly shapes the context in which personal changes occur.

Another area of particular attention for clinical social workers is human diversity. Racial, cultural, and ethnic factors may shape what kinds of intervention are acceptable to some clients. Religious beliefs and values may also shape the kinds of interventions that are acceptable to some clients (Betancourt, 2003). Socially structured oppression through racism, sexism, ableism, homophobia, and transphobia may influence how many actions and symptoms are understood as well as what kinds of interventions may be most effective in addressing them. However, the impact of socially structured oppressions is rarely assessed in psychotherapy and social services outcome research studies.

A thorough assessment will identify a number of factors that are considered concerns and challenges along with a number of factors that represent strengths and sources of active or potential support. Immediate risks to safety or of harm to others must be identified quickly. Assessment is a demanding process that requires professional expertise of several kinds. We will review assessments more completely in Chap. 4.

Information Needs May Not Always Be About Selecting Treatments

The research information needs identified in the first step of the EBP practice decision-making process are not only about selecting treatment options (Oxford Centre for Evidence-based Medicine, 2009, 2016, 2018; Rubin, 2008). It may be that further differential diagnosis is needed. If so, research information about such differential diagnosis would be sought. In other cases, information about prognosis might be needed, or about the likely course (progression) of a disorder. In some cases, policy planners and administrators use the EBP process to examine the cost-effectiveness of diagnostic procedures and treatments. The kinds of research information that arise during assessment may be widely varied and do not all center on treatment planning.

A Model for Framing Clinical Questions: The PICOT Model

Sackett, Richardson, Rosenberg, and Haynes (1997) developed a specific model for framing EBM questions. It is called the PICOT, or PICO, model. To focus clinicians' practice information needs, they suggest five steps. Each step is intended to help clarify a specific piece of the client's needs as it relates to EBM and EBP (Richardson, Wilson, Nishikawa, & Hayward, 1995). The full model is detailed in Table 3.1. "P" stands for patient or problem, the "who" you need to know about. The goal is to describe the key characteristics of your client and clinical situation. "I" stands for intervention. Based on the client and clinical satiation, what are the key treatment and service needs? Do you wish to know about what works for a specific diagnosis or what preventative measures might avoid development of a full-blown problem? The goal is to be clear regarding the kinds of interventions you wish to learn about. "C" stands for comparison. Is there more than one approach to treatment? If there are multiple approaches to intervening, do you want to learn if one is more likely to be effective than another specific alternative? "O" stands for

Table 3.1 The PICOT Model

Clinical question model	
Patient, problem, or population	What are the characteristics of a group of clients very similar to my client/patient?
Intervention	What intervention do I wish to learn about?
Comparison	What are the main alternatives to this intervention?
Outcomes	What outcomes do I and the client hope for? (How exactly will outcome be determined?)
Type	What type of intervention question am I asking? (treatment? diagnosis? prevention? etiology? prognosis?)

After Sackett et al. (1997)

outcomes. To be clearer still, what specific kinds of outcome do you and your client seek? Is the goal reduction in certain symptoms or perhaps remission of the disorder as a whole? Are certain symptoms more important to achieve than other, at least at the beginning of treatment? Are there issues on social circumstances to consider? Finally, "T" stands for type of problem. Remember that EBM and EBP can address diagnostic issues, choice of treatments, choice of preventive interventions, and even the etiology and course of a disorder. What type of question do you have for which you need research information?

To illustrate the use of the PICOT model, let us look at the case of a specific client in brief. The client (P), Laticia, is an employed 26-year-old African-American woman in good physical health with no history of major depression but recurrent concerns about lack of energy and sleeping difficulties beginning in the fall. She reports similar feelings a year ago in the fall and that the problems seemed to go away in the spring. These symptoms are aspects of seasonal affective disorder [SAD]. Laticia does not meet standards for major depressive disorder. Bright light exposure has been reported to be one way to treat SAD. A useful clinical question might be (I) is light exposure therapy be more effective than (C) medication or melatonin (C) or (C) psychotherapy in (O) increasing energy and hours of sleep per night? Note that there are very specific symptoms that are the client's desired treatment outcomes. This is an example of an (T) treatment question since the symptoms are currently evident. A key goal is to identify several potentially effective treatment alternatives to address Laticia's needs. Assuming this summary includes all the key information that is currently relevant, the PICOT model both clarifies and focuses our information needs for treatment planning. Of course, it is always necessary to do a complete assessment. What might appear as SAD symptoms could alternately be a reaction to the anniversary of the death of a loved one or some other life event. Understanding the problem fully and accurately is the foundation for identifying useful treatments options.

Remember that practice information needs are not always about the selection of treatments. In mental health, initial practice questions often center on (1) a need to develop a more productive relationship with the client, (2) a need for a more definitive diagnosis, or (3) the selection of the best treatment options. Less commonly used, but no less appropriate, is (4) the selection of preventive interventions. Rubin (2008) also suggests (5) understanding the etiology of a problem or (6) understanding how a client experiences a difficulty may also be an initial information needs in EBP. However, these last two information needs, while fully valid, have not been widely addressed in the mental health EBP practice literature. Similarly, questions about (7) the etiology and (8) the course of disorders are less commonly the focus of mental health practice information needs. In medicine, economic and even ethical decision-making has become part of the evidence-based model (Snyder & Gauthier, 2008). While these are important questions, it is not always clear how each of the four parts of the EBP process (client's needs and situation, the best available research evidence, client's values and preferences, and clinical expertise) are determined and implemented in these more macro-level applications of EBP. Specifically, just who represents the "client's interests" and a "clinician's

expertise" are often omitted in the macro-level applications of EBP. Yet, for micro-level applications of EBP, the PICOT model is a useful tool to clarify a specific client's needs. Let's next look further into some of these types of practice information needs.

Enhancing the Client-Practitioner Relationship

A good deal of research and a lot of practice wisdom indicate that establishing a relationship or alliance is important to good treatment outcome (Marsh, Angell, Andrews, & Curry, 2012; Muran & Barber, 2010; Norcross, 2011; Zilcha-Mano et al., 2016). Establishing a positive working relationship is also the first order of business for all clinicians who meet new clients. Without a positive working relationship, clients may not return for a second session, making effective treatment impossible. Yet how to develop a more productive working relationship with has only recently become part of EBP. Castonguay and Beutler (2006), reporting the work of four expert groups, empirically identified several factors that impact on the quality of the client-therapist relationship. These "empirically based relationship" factors currently take the form of broad principles. For example, the group found that clients with greater levels of impairment or personality disorders are less likely to benefit from treatment than other clients who are less impaired or who do not have a personality disorder. The group also found that clinicians with secure attachments, who were able to tolerate intense affect and who could be open, informed, and tolerant about the client's religious views, were generally more effective. While fitting this work into the EBP framework is only at an early stage of development, it may be possible to identify more specific approaches to intervention that guide specific interventions.

Improving Diagnostic Assessment

In medicine, identifying the necessary diagnostic procedures often is the first step of EBM (Ebell, 2001). This emphasis on diagnostic procedures exists because specific kinds of information may be needed to be sure the diagnosis is thorough and accurate. Specific tests or procedures may be needed to ensure the correct diagnosis, and in EBM, there is often a direct link between a diagnosis and a treatment. In mental health practice, the link between diagnosis and treatment is often less specific and certain. This is in part because social work clients present with multiple needs and often fit criteria for multiple psychiatric diagnoses. There are few valid diagnostic tools available for differential diagnosis and the affirmation of possible diagnoses that fit social work client's needs. Still, diagnostic and assessment tools social workers might utilize in EBP include neurological testing, learning disabilities testing, or psychological testing. At the level of risk assessment, protocols for substance

misuse, suicide, and self-harm risk potential are very common, as are assessments of homicide potential where indicated. Clinical social workers also routinely look for child or elderly abuse and domestic violence. Specific assessment for fire-setters may be required by some states as well as to complete referrals to certain services. Using the EBP process to sharpen or improve diagnostic assessment is a fully legitimate, and underused, part of EBP in mental health.

One complication in the use of diagnostic tests in EBP is that the lack of valid and reliable instruments often limits their utility in practice. Most tests and assessment protocols in mental health add useful information but ultimately also require interpretation and judgment by the clinician. "Certain" answers and conclusions are very rare. Simply transferring the EBM diagnostic process to mental health practice and EBP may give greater authority to the results of assessment tools than is warranted. Assessment and diagnosis based on invalid or unreliable instruments is not benefit and does not fit with the premises of EBP or ethical clinical social work practice.

Assessment in today's mental health practice tends to be very brief and very focused. Assessing symptoms and risk takes priority over getting to know the whole person. Single-session or very brief "diagnostics" are commonplace in community mental health practice due to financial and other pressures. The merit of such focused sessions is that acute concerns and risks are systematically identified, such as suicide risk and substance use. The limitation of such an approach is that it may prematurely foreclose gaining and weighing other important diagnostic information. For example, as noted above, clients may not immediately share painful material such as histories of abuse. In other cases, obtaining accurate information about substance use or even housing may be difficult due to client anxiety or shame, despite direct requests for information. Without all of the information to consider, social workers can miss a critical factor influencing the diagnostic picture and in turn may begin the EBP process considering only part of the client's needs. Clinical social workers need to be sure they have a sound and complete assessment before moving on to selecting treatment options.

Selecting the Optimal Treatment

The focus of EBP in clinical social work practice is most often on the identification of potentially effective treatments for the client's concerns. Indeed, this question is the sole focus in many illustrations of the EBP process in mental health. It is very important but is not the only appropriate question for EBP. While funding and other supports make preventive services less common, identifying risk factors to get clients preventive supports may be clinically effective and cost-effective. Prevention may often be more desirable than treatment seeking to address long-standing and complex problems.

Where thorough and credible information allows sound assessment, the first step of the EBP process is often to identify and prioritize the primary treatment needs of

the client. This step involves several decisions. The key concern or diagnosis must be determined. Both psychological and social factors are often evident and important in client's presentations. Determining the priority concern may require the use of professional judgment to select one target concern from among several interrelated issues. Ideally, this priority concern will help the client make some meaningful changes quickly while also helping to enhance the alliance with the practitioner and, as necessary, making effective treatment of other concerns more possible. For example, a client with an anxiety disorder, substance abuse issues, relationship issues, and work-related issues may benefit from first addressing the co-occurring substance abuse. Yet alternatively, some clients may find help with anxiety decreases substance abuse. Professional judgment is crucial to establishing treatment priorities in collaboration with the client. In some instances, clients are mandated for treatment of specific issues that may not appear to be the optimal starting point. Professional judgment is necessary to help the client work toward mandated changes while setting the stage for later efforts that more fully address their felt concerns.

The cases in the later chapters of this book detail how priority practice information is converted into one or more answerable questions. The case examples also provide information on how professional judgment is used to prioritize and direct assessment and treatment choices. While EBP emphasizes the use of research knowledge to guide treatment planning, there is very little research on how mental health practitioners make these expert choices. There are also no experimental studies of this process for ethical reasons. The use of supervision and consultation is always encouraged.

Once practice information needs are fully defined, the next step of the EBP practice decision-making model is to locate the best research knowledge to guide decision-making.

Step 2: Efficiently Locate Relevant Research Knowledge

Since a key part of EBP is to use research results to guide and affirm assessment and treatment choices, the second step is to find relevant research results to answer your practice question. This step requires a very different form of professional expertise than does identifying the practice question that begins the EBP process. Here the key expertise is more like that of reference librarians and information technologists than that of most mental health clinicians. Yet learning to do a literature search is part of professional social work training and is familiar to most clinical social workers. This area of expertise may be off-putting to clinicians who are less comfortable with electronic technologies, but the necessary skills can be updated and refined with a little practice. Turning to professional librarians for help and training may also be efficient, especially for beginners. In addition, there are also many print and online resources to help guide the location of useful research results.

It is important to note that the EBP process presupposes adequate and efficient access to current research results by mental health clinicians. This requirement

often poses a new financial burden on mental health agencies and a new time burden on individual professionals. Many sources of very useful research information for mental health practice are compiled and made available by for-profit publishers and online data compliers. These publishers and online data providers have substantial costs to operate their services. In turn, access to current materials can represent a substantial new cost to clinics and clinical social workers engaged in the EBP process.

Still another important issue is "information overload" (Greenhalgh, Howick, & Maskrey, 2014). There has been a rapid increase in the number of sources of clinical information, such a journals and books, as well as a proliferation of technologies for accessing these materials. Some professionals find the number of materials they need to examine so vast that they quickly become discouraged. Searches in multiple databases with different search methods can be challenging. Even simple searches using Wikis and Google can reveal staggering amounts of information (i.e., 486,000,000 "hits" for depression on Google). This information may prove to be irrelevant, inadequate, commercial, or based on dubious sources. Finding useful, high-quality materials can be difficult.

Print Resources

In response to the growth of EBM and EBP, a number of organizations, both professional and for profit, have begun to develop summaries of research results. Books, such as Weisz and Kazdin's (2017) *Evidence-Based Psychotherapies for Children and Adolescents*, Carr's (2009) *What Works with Children, Adolescents, and Adults?*, Roth and Fonagy's (2005) *What Works for Whom? A Critical Review of Psychotherapy*, and Fonagy et al.'s (2015) *What Works for Whom? A Critical Review of Treatments for Children and Adolescents* (2nd ed.), provide overviews of EBP and a summary of relevant research. These books are good starting points and also provide a background understanding for clinicians. Another useful volume is the *British Medical Journal*'s (or *BMJ*) (2009/2010) "Clinical Evidence Handbook" (archival editions are online at https://www.ncbi.nlm.nih.gov/pmc/journals/520/). This work is organized like an encyclopedia, offering detailed information about psychological and psychopharmacological treatments for several common mental health disorders. It is a very practical resource for mental health practitioners. (More clinical practice information sources will be detailed in Chap. 5.)

Online Resources

Online resources are mainly "foreground" resources that report summaries of research findings on a single specific disorder or problem. They frequently assume that the user has substantial background knowledge about clinical assessment,

treatment models, information searches, research design, research methods, and statistics. This may be intimidating to many clinicians who attempt to read and understand research methods and results. Online resources tend to be easier to access from multiple locations than are books and print resources. They do require some infrastructure such as computers, smartphones, and Internet connections to use. In addition to ease of access, online resources can be easily updated frequently, unlike print resources and books. Many paid, subscription-based, EBP resources are updated monthly or even more often. Thus, they offer practitioners the latest research information. Beyond subscription options, there are also many excellent free online EBP resources.

The most rigorous online compilation of research evidence for clinical social work practice is the Cochrane Collaboration's Library of Systematic Reviews. Named after Scottish physician Archie Cochrane, who is widely acknowledged as the founder of the current EBP movement, the Cochrane Library (www.cochranelibrary.com/) offers thoroughly reviewed summaries of research organized by diagnosis. Medical and mental health issues are addressed, and clinicians can find a concise summary or abstract of the relevant available research concerning the diagnosis they are searching. For social service, criminal justice, and educational programs, the Campbell Collaboration (www.campbellcollaboration.org) offers similar high-quality research summaries. In contrast to the Cochrane Collaboration, the Campbell Collaboration targets social problems and does not use a medical model orientation. The Campbell Collaboration Online Library (https://campbellcollaboration.org/library.html) offers a wide, but somewhat spotty, collection of detailed reviews of research on social service interventions and programs. Both the Campbell Collaboration and the Cochrane Collaboration apply the same high standards to systematic reviews of research.

Online Practice Guidelines

A different starting point is offered through online practice guidelines. Clinical practice guidelines are statements intended to improve practice including specific practice recommendations. They are informed by systematic reviews of research evidence that assess both the benefits and harms of different care options. Most are medically oriented and defined by diagnosis. Well-crafted guidelines provide a summary of research results for a specific disorder as well as a set of steps or principles of treatment for practitioners to follow or avoid. That is, not only a summary of the research but an interpretation of the research by expert panels is offered. However, the standards used for establishing practice guidelines vary widely, as does the transparency of the guidelines statements. Guidelines may not be as clear or as rigorous as systemic review summaries from the Cochrane and Campbell Collaborations. In contrast to the principles of EBM/EBP, expert opinion may heavily shape practice guidelines in some instances.

The American Psychiatric Association's *practice guidelines* (https://psychiatryonline.org/guidelines) provide research-supported recommendations for the assessment and treatment of several common psychiatric disorders. The American Psychological Association (https://www.apa.org/practice/guidelines/index.aspx) also offers practice guidelines, but their purpose is more to sensitize and guide practitioners than to summarize research on treatment outcomes. The American Psychological Association's guidelines address many issues of human diversity, such as a guideline for working with transgender and gender nonconforming individuals, which may be vital to doing good contemporary practice. The American Medical Association sponsors *Guideline Central*, a free online resource and app. Under the specialties tab (https://www.guidelinecentral.com/summaries/), clinicians may find guidelines from a wide range of sources on psychiatric, psychological, and medical issues. For example, clinicians will find guidelines for assessing dementia and for assessing suicide risk through Guideline Central. Guideline Central is working to improve the transparency and research base of their practice guidelines. Guideline Central is part of an effort to replace the sudden defunding and closing, in July 2018, of the US government's National Guideline Clearinghouse. The National Guideline Clearinghouse provided the most extensive collection of practice guidelines and drew on international research sources. Mental health professionals widely criticized its demise.

Many high-quality research summaries and practice guidelines on single practice topics are readily available to those doing EBP. High prevalence disorders are often the focus of such summaries and guidelines. The research knowledge made available in such summaries and guidelines can be a very valuable way to ensure practice decisions are informed and guided by quality research. Online options make many resources efficiently available to practitioners as well as consumers. (URLs for additional online resources are detailed in Chap. 5.)

Both summaries of research and practice guidelines have two limitations. First, they include only a limited range of the many DSM or International Code of Diagnoses (ICD) defined diagnoses or potential client problems. They also address only a single diagnosis or practice issue, where many clients have multiple, comorbid (or co-occurring), clinical concerns and social needs. Second, available guidelines may not offer clear conclusions about what treatments or specific interventions are effective. Many summaries note that rigorous research is simply unavailable, making it premature to draw conclusions about the effectiveness of any treatment for the target disorder. This lack of evidence may be very frustrating to the practitioner seeking to engage in the EBP practice decision-making process.

A treatment that has not been researched is not necessarily ineffective. The lack of research exists because researchers have not studied all disorders in depth due to lack of funding, lack of agreement on the conceptualization of the disorder or on just what constitutes a "successful" outcome, or lack of participants for studies. In addition, there are many practitioners who are using effective treatment approaches, but do not have the expertise or interest in publishing their findings. The large number of disorders and their variations included in the DSM would make it impossible to fund and undertake large-scale experimental studies on all

the disorders in any reasonable period of time. Still, seeking out available research evidence can help guide intervention planning in many cases where research is available and rigorous.

What the Literature Shows About "Light Therapy"

Drawing on the concerns of Laticia, the 26-year-old African-American woman described above, the clinical social worker wants to answer the practice question "Is bright light therapy as effective or more effective for treating seasonal affective disorder symptoms than are medication, melatonin, or psychotherapy?". A Cochrane Library search for the term "light therapy" yielded four systematic reviews completed between 2011 and 2015. However, the focus was on *preventing* occurrences of SAD symptoms, rather than treating present SAD, though symptomatic improvement was examined.

Forneris et al. (2015) studied psychological therapies for *preventing* SAD. Yet their reports do include information on symptomatic improvement in adults with a history of SAD. After reviewing 2986 publications and assessing 91 for full review, the authors "found no controlled studies on use of psychological therapy to prevent SAD and improve patient-centred outcomes in adults with a history of SAD" (Abstract, main results). They conclude that "Presently, there is no methodologically sound evidence available to indicate whether psychological therapy is or is not an effective intervention for prevention of SAD and improvement of patient-centred outcomes among adults with a history of SAD" (Abstract, author's conclusions). Forneris et al. (2015) argue that it is uncertain, without experimental research, if psychotherapy can be an effective treatment for SAD.

A second Cochrane systematic review on light therapy for preventing SAD by Nussbaumer et al. (2015) reports that:

> Bright light therapy reduced the risk of SAD incidence [occurrence] by 36%; however, the 95% confidence interval (CI) was very broad and included both possible effect sizes in favour of bright light therapy and those in favour of no light therapy (risk ratio (RR) 0.64, 95% CI 0.30 to 1.38). Infrared light reduced the risk of SAD by 50% compared with no light therapy, but in this case also the CI was too broad to allow precise estimations of effect size (RR 0.50, 95% CI 0.21 to 1.17). Comparison of both forms of preventive light therapy versus each other yielded similar rates of incidence of depressive episodes in both groups (RR 1.29, 95% CI 0.50 to 3.28). The quality of evidence for all outcomes was very low. Reasons for downgrading evidence quality included high risk of bias of the included study, imprecision and other limitations, such as self rating of outcomes, lack of checking of compliance throughout the study duration and insufficient reporting of participant characteristics. Investigators provided no information on adverse events. (Abstract, main results)

(We will thoroughly review statistics and their interpretation in Chap. 7.) Light therapy may *prevent* SAD in adults, but it is not clear that it is an effective treatment for existing SAD symptoms.

Looking at melatonin as another possible treatment option, another systematic review by Kaminski-Hartenthaler et al. (2015) states that "No available

methodologically sound evidence indicates that melatonin or agomelatine is or is not an effective intervention for prevention of SAD and improvement of patient-centred outcomes among adults with a history of SAD" (Abstract, author's conclusions).

A third Cochrane systematic review by Thaler et al. (2011) studied the effectiveness of second-generation antidepressant [SGA] medications for treating SAD. They found three randomized controlled trials of these medications over 5- to 8-week long treatments. The three studies include 204 participants, with an average age of approximately 40 years, 70% of whom were female. They state that:

> Results from one trial with 68 participants showed that fluoxetine was not significantly more effective than placebo in achieving clinical response (risk ratio (RR) 1.62, 95% confidence interval (CI) 0.92 to 2.83). The number of adverse effects was similar between the two groups. We located two trials that contained a total of 136 participants for the comparison fluoxetine versus light therapy. Our meta-analysis of the results of the two trials showed fluoxetine and light therapy to be approximately equal in treating seasonal depression: RR of response 0.98 (95% CI 0.77 to 1.24), RR of remission 0.81 (95% CI 0.39 to 1.71). The number of adverse effects was similar in both groups. (Abstract, main results)

The authors also note that adverse effects from the SGA medications were notable: "Between 22% and 100% of participants who received a SGA suffered an adverse effect and between 15% and 27% of participants withdrew from the studies because of adverse effects" (Abstract, main results). Given the potential for side effects, light therapy appears to generate similar results with lesser adverse effects, including discontinuation of the therapy.

A Google Scholar search reveals a published meta-analysis by Golden et al. (2005) reports that "bright light therapy" using specific lights in the morning was significantly more effective at the $p < 0.0001$ criterion level than was placebo intervention across eight randomized controlled trials (RCTs) including 360 people who had SAD. The effect size for the bright light therapy was large (Cohen's $d = 0.84$; 95% confidence interval 0.60 to 1.08). This indicates a large and beneficial difference in outcomes for people who received treatment versus those who did not. (We will review these statistics and their interpretation in Chap. 7.) Four studies showed remission [ending] of SAD symptoms was three times more likely when using bright light therapy than by placebo alone. Another bright light therapy using a "gradual dawn" method was also significantly more effective at the $p < 0.0001$ level than was use of red lights or a "rapid dawn" intervention (Cohen's $d = 0.73$; 95% confidence interval 0.37 to 1.08). This result aggregated five studies, including 69 patients with SAD. Light therapy seems to have some experimental research support and moderate to large effect size or impact.

However, looking a bit deeper, commentary by Terman (2006) indicates several studies on bright light therapy were mainly done by just one research team at a single university and that the best designed study did not show a significant difference. Similarly, the same research team completed all the gradual dawn therapy research. The Cochrane Library systematic reviews also questioned the quality of the available research on treatments for SAD. This would suggest some caution in relying on the research conclusions due to possible bias. Nonetheless, the research supports the view that bright light therapy appears beneficial in reducing SAD symptoms.

Comparison to psychotherapy alone was not found, so it appears psychotherapy was not studied as a treatment for SAD. This may mean simply that it has not been researched, but it does mean there is no strong empirical support for psychotherapy as a treatment for SAD. No information on racial or ethnic variation was included or mentioned in any of the reviews. Antidepressant mediations were reported to produce adverse side effects for some patients (as is often the case). No harms or side effects were reported for bright light therapy. However, no practice guidelines for treating SAD were located.

In discussion with the client, the answer to the question "What treatments have documented effectiveness for SAD?" appears to be that light therapy has considerable research support (the I and C of the PICOT model). Bright light therapy alone has the most consistent, though limited, research support and little apparent risk. The clinical social worker would next discuss and explore these options with the client to determine if either bright light therapy or medication is consistent with her personal values and preferences.

Many systematic reviews include "plain language" summaries of research results. These are available in the abstracts of Cochrane Collaboration and Campbell Collaboration reviews without cost to end users. (Full reviews from the Cochrane Collaboration do have fees for US users. Vogel (2018) notes that the Cochrane Collaboration has been challenged for using this paid review model as some board members and others believe such reviews should be available free as a public good.) Abstracts of systematic reviews are often available in several different languages. They may be lengthy. Plain language summaries may be used to share research results directly with clients, though sometimes even plain language can be confusing or may include technical terms—though statistics are generally not included. The summary as a whole provides a useful perspective on the focal concern and details about the studies included or excluded. A Cochrane Library systematic review by Thaler et al. (2011) on the use of antidepressants for treating SAD includes this plain language summary:

> Seasonal affective disorder (winter depression) is a type of depression that recurs in the autumn and lasts until the spring. It is similar to regular depression except sufferers are usually very tired and have an increase in their appetite. It is more common in countries with few daylight hours in winter. One of the mainstays of treatment for all depression, including winter depression, are second-generation antidepressants (SGAs) such as selective serotonin reuptake inhibitors (SSRIs), and serotonin and norepinephrine reuptake inhibitors (SNRIs). It is not clear how well these drugs work for winter depression and how they compare to each other or to other types of therapy such as light therapy.
>
> We found three trials with a total of 204 participants that looked at one SGA (fluoxetine) compared with placebo or light therapy. We did not find any trials on other SGAs. One trial (68 participants) compared fluoxetine with placebo. Fluoxetine appears to work better than placebo for winter depression, but we cannot say this with certainty due to the small numbers involved in the trial. Approximately the same number of participants in both groups experienced a side effect. We found two trials (with 136 participants in total) that compared fluoxetine with light therapy. When we combined the results of these two trials, we found that there was no difference between the two groups: approximately 66 people out of 100 improved in both the fluoxetine and light therapy groups. We are unsure whether this summary result is correct because the trials are small and have some problems with their design as well as a high dropout rate (many participants did not finish the trials)… (plain language summary).

This summary states that fluoxetine appears to be more effective than placebo in treating SAD and both treatments had similar side effects. On the other hand, there was no difference in effectiveness between fluoxetine and light therapy treatments. Yet confidence in these results is limited as the samples were small and the research designs used had some limitations. Such summaries might be stated by the clinician to the client later in the EBP process.

It is worth noting that this literature search took a well-trained clinician about 3 hours to complete. This included preliminary searches to identify relevant articles and reviews, locate copies of the full text articles, and review their content. As we will examine later in this book, doing the EBP process takes expertise and time. Institutional supports and access to research materials are necessary to practice EBP.

Today's electronic search engines can yield huge amounts of complex and detailed information on a selected topic. This is often (but not always) the case in searches for mental health topics. The quality of this information may vary widely, as does the quality of the sources. Different perspectives may be available, often framed by specific points of view on the topic. For example, the views of consumers or clients, professional practitioners, and professional researchers may lead to different questions, study methods, and results (Petr, 2009). Researchers may also differ in their appraisal of the quality of results of findings of research studies. Thus, once you have located information about your practice problem, the next step is to appraise its quality and its relevance to your practice situation.

Step 3: Critically Appraise the Quality and Applicability of Found Knowledge to the Client's Needs and Situation

Scholars and practitioners with backgrounds in quantitative, epidemiological research originally organized and promoted the EBM and EBP movements. Dr. Cochrane studied populations with pulmonary diseases from a strong quantitative perspective. Dr. Sackett, Rosenberg, Muir Gray, Haynes, and Richardson (1996) also promote determination of "quality" from a quantitative, statistical perspective. The EBM and EBP literatures clearly place the greatest value on research evidence derived from quantitative, experimental research designs. As discussed in Chap. 2, this type of research design has strong interval validity allowing cause-effect relationships to be established. In reports of RCTs, overall, less attention is directed to the conceptualization of problems and measures, or to comorbid disorders and social circumstances, than to research design and statistical analysis.

The Hierarchy of Research Evidence in EBM/EBP

Researchers using the standard EBP model, drawing on EBM, generally endorse a specific hierarchy of quality in research evidence. This hierarchy of "evidence categories" is meant to help clinicians and researchers quickly appraise the quality of

research knowledge. The recently updated hierarchy of research evidence developed by the Oxford University Centre for Evidence-based Medicine (2009, 2018) is presented in Table 3.2. An almost identical hierarchy is offered by the GRADE (undated) organization. The Oxford evidence hierarchy has several clear elements. Evidence obtained from comparisons across an untreated control group and a treated group is prioritized. Such comparisons help identify if a given treatment or intervention produces better results than no treatment at all. Since some mental health conditions appear to improve over time without treatment, these research designs help demonstrate that the treatment yields better results than does time alone. Further, by prioritizing random assignment of clients to the treated or untreated group, bias across the groups is limited. Random assignment minimizes any systematic bias in the assignment of clients to treated or untreated groups and is another asset of carefully done experimental research (RCTs).

Of course, even experimental research may have limitations. The lack of adequate criteria for including or excluding people in the sample selection process, overly narrow inclusion criteria, small sample size, missing data, and lack the

Table 3.2 The hierarchy of EBM/EBP evidence (for treatment outcomes)

Level 1a: Evidence obtained from a "systematic review" evaluating and integrating the results of several experimental research studies (or RCTs) showing homogeneity (consistency) of results
Level 1b: Evidence obtained from a single experimental study (RCT) with a narrow confidence interval (showing high precision of results that are better than no treatment)
Level 2a: Evidence from a systematic review of several quasi-experimental or "cohort" studies (with no control groups or retrospective control groups) showing homogeneity of results
Level 2b: Evidence obtained from a single-cohort study or low-quality experimental study
Level 2c: Evidence obtained from "outcomes research" or observational studies of treatment results based on a retrospective or "after the fact" matching of clients, lacking random assignment
Level 3a: Evidence obtained from a systematic review of "case-control" studies (not experiments) showing homogeneity of results
Level 3b: Evidence obtained from a single of "case-control" study (not experiments) showing homogeneity of results
Level 4: Evidence obtained from a "case series" of observations made on clients with no control group or random assignment and poor-quality case-control or cohort studies (results of multiple single subject design studies would be level 4 in this model)
Level 5: Expert opinion, "bench research," or first principles

The results of multiple studies of any type are considered as higher-quality evidence than are the results of any single study of the same type. Note that it is assumed that the measures used to determine effectiveness are fully adequate (valid), reliable, and comprehensive. The populations studied are also assumed to be adequate in numbers and in relevant social characteristics. Further, it is assumed that treatments or interventions are fully specified and that, in experiments, no other factors influence treatment outcomes. Where reviewers have concerns about the quality of a study of a given type, the next lower grade may be assigned. That is, an RCT of questionable quality may be rated as a "2" given concerns about its rigor

This table is adapted from the Oxford Centre for Evidence-based Medicine's Levels of Evidence (2009)

The authors also point out that levels do not provide you with a definitive judgment nor do they automatically create a recommendation for treatment (Oxford CEBM, 2018)

"statistical power" necessary to detect differences may be limitations of experimental research. These limitations can undermine the ability of an experiment to detect differences in outcome or to allow generalization of results to larger client populations. (We will explore these issues of determining research quality in greater depth in Chaps. 6, 7, and 8.)

Note that the EBM/EBP hierarchy of research designs is intended to help practitioners quickly identify some key differences that impact on the quality of results. If no systematic review of experimental research (also called an RCT or randomized controlled trail) or single experimental study is located, it is appropriate to look at the best available evidence based on other research designs. These lower levels of evidence are also determined by the specific research methods used. Comparisons that do not use random assignment of participants comparing treated versus "control" conditions but do include a control or comparison group constitute level 2 and lower-rated studies. Researchers often call these "quasi-experimental" or, in the medical literature, "observational" research designs. Comparisons that do not use random assignment, and lack a comparison group, are level 2 (or lower)-rated studies.

This distinction is very important. Many observational program evaluations use only pre- and post-assessments of a single group of treated clients and do not include a formal comparison with untreated controls. This provides no basis for comparing gains due to treatment from gains due to other unidentified sources. Campbell and Stanley (1963) list several types of threats to interval validity, such as maturation or history, which are not accounted for in observational studies. Further, many program evaluations compare similar programs because random assignment may not be feasible due to legal or funding obligations. It may be unlawful and/or unethical to randomly assign clients to mental health programs or untreated control groups. In turn, level 2 studies have lesser internal validity than do level 1 studies that do use comparison groups. That is, they do not definitively show that the treatment alone causes better outcomes than does no treatment.

The distinction between the lack of a comparison group versus the lack of random assignment of research participants to the treated or to the control group may take some careful study. Outcome studies of treatment programs, such as those that are used for substance abuse treatment or severe mental illnesses, often do not use random assignment of clients to either treated or control groups. They usually do have a comparison group, though it may not be an untreated control group.

Level 3 and level 4 evidence are derived from all other *planned* research designs and methods. These include studies such as surveys or "case-control studies" in which people who have a disorder are retrospectively (after treatment) compared with people who did not have the disorder in order to see what risk factors may distinguish the two groups as time goes by. Level 3 and 4 research designs are often called "descriptive" or "exploratory" research designs. These designs are not intended to show cause-effect relationships as are true experimental designs or RCTs but are often used to identify and describe patterns or new concepts. Such patterns may serve as the foundation for future research projects aimed at exploring causal relationships among various factors.

Finally, level 5 knowledge is derived from expert "opinions." Opinion and practice wisdom are not based on any planned research design. Note that all practiced

wisdom is put into level 5, as are summaries developed by expert practitioners or researchers that are not specifically tied to research evidence as defined by the EBM/EBP model.

The levels of research evidence are a shorthand device meant to help practitioners and others appraise the quality of available knowledge on a topic quickly. In EBP, mental health clinicians are directed to look for level 1 systematic review or experimental results first and to give priority to this knowledge over the other types. Thus, an early step in an EBP appraisal of research is to determine which are derived from rigorous experimental research. In many situations experimental research will be located. However, for other disorders or concerns, no experimental research may be found. This is not necessarily a matter of an inadequate or incorrect search; it may simply reflect the lack of experimental outcome research on the chosen topic. In such cases, the EBP model directs practitioners to level 2, then level 3, and then level 4 results. All these levels of evidence are parts of the EBM/EBP model, but the confidence one has in the quality of knowledge is higher when the optimal research designs and evidence are available. Level 5 is appropriate to use when no other research evidence is found. The EBP process calls for practitioners to use "the best available evidence" in making decisions, which means to use the best at whatever level of design quality is available.

Only level 1 results allow cause and effect to be determined; all other levels are suggestive but do not demonstrate that the treatment/interventions led to the change found (because they are not based on experimental research designs). It may then appear that use of level 3 and level 4 results is only a poor approximation of the kind of research-guided decision-making the EBP model promotes. However, research is developed incrementally, usually beginning with exploratory stages that clarify what constitutes a disorder and what constitutes a treatment. Case studies and personal stories can be of great value. Descriptive and correlational studies help clarify what other attributes may exacerbate or diminish the impact of a disorder or mask it altogether. They may add to diagnostic profiles and to identifying risk factors. Such studies are also of great value.

While levels of evidence are an efficient way to determine the likely quality of research designs, other aspects of research are also important to judging its quality. For example, who is included in the study sample, and who may be excluded or not specified, may also matter in clinical decision-making. (These issues are explored in Chap. 7.) Many research summaries fail to detail important aspects of human diversity beyond age and gender. Critical thinking about research quality, and applicability to a specific client, is vital to doing EBP well.

Practice Guidelines: Research Support for Specific Techniques

In practice guidelines, groups of clinical and research experts go beyond apprising research results to rating specific practice interventions. That is, they establish a list of good practices, sometimes called practice parameters, and rank each component

based upon the research support for it. Specific practice recommendations are then assigned a letter grade from "A" to "D" (see Table 3.3). The grade assigned to each recommendation is based upon the quality of the available research evidence to support it. "A" level grades are based on evidence from experimental research or RCTs. "B" level grades are based on research that does not use random assignment (i.e., quasi-experiments). "C" level grades are based on observational studies (no random assignment nor comparison groups). "D" level grades are based on "expert opinion." Clinical social workers are reminded that the professional groups assigning such grades, while themselves experts, are creating recommendations that might, ironically, appear to be "expert opinion." Clinical expertise is always required in EBP to determine how appropriate treatment recommendations are and how well they fit with each specific clinical situation and client.

As an example, in the Michigan Quality Improvement Consortium's (2010) practice guidelines for major depression in adults, one major practice standard is to "initiate antidepressant medication following manufacturer's recommended dose." This practice standard is given an "A" grade. An "A" grade means that this recommendation is based upon evidence derived from RCTs or level 1 research designs. The next recommendation "referral to, and coordination with, behavioral health specialist when [there is an] identified or suspected risk of suicide, or a complex social situation" is given a "D" grade. A "D" grade indicates the recommendation lacks research support and is based solely on expert opinion or level 5 practice wisdom. Of course, if primary care physicians had concerns about suicide risk, it is plausible that they might follow and manage this concern on their own or make such a referral. The grade alone is not a sufficient basis for making a clinical practice recommendation as there may be other factors to consider, such as whether the sub-

Table 3.3 Recommendation grades (for recommendations in practice guidelines)

Grade A—assigned to specific treatment recommendations where at least one randomized controlled trial is found as part of a body of literature of overall good quality and consistency addressing the specific recommendation
Grade B—assigned to specific treatment recommendations where at least one well-conducted clinical study without random assignments (a quasi-experiment) is found on the topic of recommendation
Grade C—assigned to specific treatment recommendations where at least one observational studies that does not use either random assignment nor comparison groups are found on the topic of recommendation
Grade D—assigned to specific treatment recommendations where only expert committee reports or opinions and/or clinical experiences of respected authorities are found on the topic of recommendation

Consistent research results over multiple studies of any type (experiment, quasi-experiment, observation, case study series) are viewed as more persuasive than is a single study of the same type. Where reviewers have concerns about the quality of a study of a given type, the next lower grade may be assigned. That is, an RCT of questionable quality may be graded as a "B" given concerns about its rigor. A "D" grade is assigned where no formal research has been completed on the issue. Adapted from the US Department of Health and Human Services' Agency for Healthcare Research and Quality National Guidelines Clearance Center. Retrieved from http://guidelines.gov/content.aspx?id=15647&search=major+depression (Not all grading rubrics use the same standards)

jects who were included are similar to the specific client. The grade does, however, indicate whether or not, and to what extent, each standard is supported by research evidence. As always, expert professional expertise is required to determine the best course of treatment for any particular client and circumstances.

It is quite likely that there are no experimental studies comparing the outcomes for patients with major depression and suicide risk as treated by primary care physicians alone versus primary care physicians and behavioral health specialists jointly. This is why the "D" grade is applied. It is important to bear in mind that the recommendation does not mean physicians should not make such referrals, only that there is no strong research evidence that it leads to better outcomes for such clients. Yet, ethical and legal guidelines regarding the safety of clients are paramount in such a clinical situation, whether there is research to support such action or not. Professional expertise and critical thinking are vital in all clinical practice.

Is This Research Applicable to My Client's Needs and Situation?

Once studies based on strong research designs are found, the issue of their relevance to your particular client also arises. Experimental studies are planned to examine the impact of just one variable—usually the treatment—and its effect. This often means that clients with just one disorder are included and all others excluded from the research. The yield of the research may, or may not, be informative about clients with multiple, comorbid disorders. Your client may also have medical conditions or other life circumstances that make the use of an otherwise effective treatment inappropriate. While the ability of experiments to demonstrate treatments cause a change is a real strength, experimental results may be only narrowly applicable.

Some scholars state that experiments may show effectiveness only in the "laboratory" (meaning tightly controlled circumstances, not use of a real lab) (Glasgow, Lichtenstein, & Marcus, 2003; Hunsley, Elliott, & Therrien, 2013; Signal, Higgins, & Waljee, 2014). They draw a distinction between "efficacy studies" based on laboratory conditions and "effectiveness studies" that are based in real-world clinical conditions. Effectiveness studies include people with comorbid conditions and varied circumstances, which reduce their internal validity (i.e., the ability to demonstrate that the treatment causes the change). The strength of effectiveness studies is that they can show a treatment produces change in real-world conditions. In this way effectiveness studies have a practical advantage over the more tightly controlled efficacy studies. However, interpreting their results, and to whom the results best apply, can be unclear.

It is always important to examine if the samples on which research is completed are similar to your specific client. Studies focusing on adults may have not automatic relevance to studies of children (though they sometimes do). Studies of adults may also yield different results than a study of elders (though not always). In addition, elders tend to be disproportionately omitted from clinical trials in medicine (Zulman et al., 2011). Most efficacy studies address just one diagnosis, such as

major depression, and carefully exclude people with comorbid conditions. Such studies *do* show that a treatment is effective for a specific disorder (or not) but may not show effectiveness for persons with this disorder and other comorbid disorders. Comorbid social circumstances, despite being somewhat assessed under the now deleted axes IV and V of the DSM-IV-TR (American Psychiatric Association, 2000), may also impact upon a client's ability to undertake and complete a specific treatment or program. Research results may be generally or broadly applicable, but other factors may influence the outcome for any single client.

Another concern about the applicability of research results centers on ethnic (Sue & Zane, 2005; Zayas, Drake, & Jonson-Reid, 2011), gender (Levant & Silverstein, 2005), gay and lesbian bisexual and transgendered individuals (Brown, 2005), and disabilities (Olkin & Taliferro, 2005). Many otherwise well-planned studies do not fully specify the composition of their sample beyond addressing the disorder under study. It is often very hard to assess from publications if people from diverse backgrounds and with varied belief systems were included in the available research. If the client you serve is a recent immigrant from a different culture, it may remain unclear if the research results fit the belief systems and responses of such clients. Other diverse populations may simply be rendered invisible due to lack of clear details about study samples.

It may also be unclear if the measures used to assess the mental health disorder are designed to reveal disorders in non-majority populations. Most measures of mental health disorders are "normed" or rated in comparison to middle class white populations. They may not adequately capture symptoms and behaviors that may be expressed somewhat differently in populations of color (Benuto, 2013; Benuto & Leany, 2015; Benuto, Thaler, & Leany, 2014; Drisko, Corbin, & Begay, 2019; Jones, 1996; Williams, Yu, & Jackson, 1997). These measures may not even include items related to disabilities or other sources of social difference. The mental health clinician must decide if the available research fits the ethnicity, social characteristics, and belief systems of each unique client. One important step in making this decision is to talk directly with the client about what the research shows.

In our example of Laticia, the 26-year-old African-American woman seeking help with her lack of energy and difficulties sleeping in the fall, two systematic reviews offered summaries of the results of multiple experiments. She reports no other disorders, so looking at research on SAD alone is appropriate. However, no information about the ethnic background of participants was included in the systematic reviews. There might be ethnic values, or other personal characteristics and needs of the client, that make bright light exposure an unacceptable treatment. Differences in sexual orientation might also matter, along with different abilities as appropriate. The clinical social worker and the client need to discuss how the client thinks and feels about the relevance of the research evidence to her specific needs and situation in the context of her culture and values.

Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture

Once the best available research is identified and appraised for quality and relevance to the client, the fourth step in EBP is to collaboratively discuss the research results with the client. This step obligates the practitioner to synthesize and summarize the research results succinctly and clearly in plain language. This step also helps the clinical social worker clarify what is known about the treatment options. This act of synthesis requires many forms of clinical expertise and solid professional judgment.

Drisko (2017) argues that there are several reasons why a collaborative discussion and not simply "telling" the client about treatment options is important. One key reason is based on professional ethics and values. Direct discussion allows the client to learn about, compare, and evaluate the various treatment options. Gambrill (2001) argues that this is an ethical imperative for social workers. Indeed, the US National Association of Social Workers *Code of Ethics* (2017) states that:

> Social workers should use clear and understandable language to inform clients of the purpose of the services, risks related to the services, limits to services because of the requirements of a third party payer, relevant costs, reasonable alternatives, clients' right to refuse or withdraw consent, and the time frame covered by the consent. Social workers should provide clients with an opportunity to ask questions. (1.03)

Fully informing clients is important to supporting their self-determination and cooperative decision-making. In today's practice world, clients have often done their own searches of treatment options or may have learned a great deal through discussion with others who have the same concern. Of course, these views may be very well informed or may simply be horror stories from others who have had bad treatment experiences. Active, collaborative discussion allows the client to share their views and interests and allows the practitioner to help clarify any misunderstandings. Collaborative discussion enhances client understanding of their situation and options in the context of learning about what the best available research shows. It is also very helpful to developing a clear treatment contract.

Drisko's (2017) second reason for collaborative discussion is to allow for a culturally competent treatment planning process. To overcome disparities in health care, culturally competent care has been proposed to address these concerns in practice (Smedley, Stith, & Nelson, 2002). Romana (2006) defines culturally competent practice as "the delivery of health services that acknowledges and understands cultural diversity in the clinical setting and respects individuals' health beliefs, values, and behaviors" (p. 1). This is inherently an individualized and interactive process. Cultural competence requires that clinicians have knowledge of diverse social groups but also that they actively learn about the personal views and meanings made by each client. It involves practicing cultural humility, personal authenticity and openness, and curiosity about each individual patient (Huey, Tilley, Jones, & Smith, 2014; Ortega & Coulborn Faller, 2011; Romana, 2006; Tervalon &

Murray-Garcia, 1998). Interactive collaborative discussion about the meaning of various treatment options also diminishes power dynamics in health care. It may help empower clients as well. There is preliminary evidence that cultural humility and co-learning do impact outcomes. Beach et al. (2005, p. 256), in their systematic review of 34 relevant studies, report that there is "excellent evidence that cultural competence training improves the knowledge of health professionals… good evidence that it improves patient satisfaction…and limited evidence it improves adherence and outcome." Such discussions also allow for addressing multiple forms of human diversity (e.g., age, sexual orientation, different abilities, gender variance) and how they shape a client's comfort with research-supported treatment options.

Drisko's (2017) third reason to include active collaboration is that it can enhance the working or therapeutic relationship between the practitioner and client(s). Indeed, psychotherapy research has demonstrated that "if a client is not attuned to the approach being offered and shows resistance to the treatment, persistently and insistently offering the same approach is not therapeutically helpful and probably is harmful" (Wampold, 2010, p. 54). To collaboratively explore treatment options builds client motivation and enhances the therapeutic alliance between client and clinician.

Part of this discussion should always focus on how the research-based options fit with the client's belief system and expectations. For example, Castonguay and Beutler (2006) report that there is empirical evidence that openness to the religious beliefs of clients can both strengthen the client-practitioner relationship and improve overall outcomes. The practitioner need not share personal beliefs with the client but must show openness and support for the client's beliefs. Direct discussion of treatment options, and exploration of the client's views, facilitates understanding of the client's perspective. Research continues to demonstrate that successful treatment is heavily dependent on the client's agreement with both the explanation for the problem and proposed treatment approach (Wampold, 2010). The explanation for why the problem exists and what to do about it must be aligned with the client's values and belief systems.

Clients may sometimes refuse treatment options that have good research support. Clients may find research-supported options to be contrary to their cultural expectations and belief systems, or they may identify practical concerns like transportation and missing work. In such cases, alternatives should be offered when available. In no instance should clients be forced to participate in treatments that they find unacceptable. The EBP process provides a forum for increasing client participation in treatment planning. This participation can increase motivation and help solidify the treatment alliance. To pressure clients into undertaking treatments they find unacceptable may undermine important elements that promote improvement. Such pressuring also contradicts the National Association of Social Worker's *Code of Ethics* (2017), undermining client dignity and self-determination.

There are situations in which courts or other authorities mandate treatment and require client participation in programs. It is fully appropriate to help clients understand the merits of programs supported by research evidence. It is also appropriate to help clients articulate their concerns about such treatments based on feelings of

coercion or lack of motivation. Similarly, where publicly funded insurance programs or other payment-based limitations push clients to accept treatments they find unacceptable for any reason, direct discussion with the client must be undertaken. This should support the treatment alliance while helping the client state their concerns to the parties pushing specific treatment options they find objectionable. The clinical social worker may need to work with the client to advocate for alternate treatments.

Clients most often find discussion of treatment options a helpful way to increase their participation and sense of involvement in treatment planning. This process can aid understanding, can be empowering, and can demonstrate the openness of the clinician to the client's culture, views, and beliefs. In addition, it is consistent with ethical social work practice principles of transparency and allowing clients to be partners in the treatment process.

Step 5: Synthesizing Client Needs and Views with Relevant Research and Professional Expertise, Develop a Plan of Intervention

Once the client's views regarding the treatment options are understood, a final treatment or intervention plan is developed. This plan will usually take the form of an oral and/or written contract with the client and a written note in the client's record. The written record should briefly reference the research information supporting the choice of treatment. Such a record would also document the use of the EBP model. Any concerns raised by the client regarding the treatment should also be formally documented.

Treatment goals should also be clearly defined and stated. Treatment models differ in their intended outcomes and in how they are assessed for effectiveness. Therefore the PICOT model emphasizes specifically identifying the outcomes for treatment and looking carefully at the outcomes used by research studies. Before you and your client begin treatment, it is essential that there is agreement on the goals of treatment and the specific outcomes being sought. Different treatment approaches may emphasize different outcomes, and these various outcomes may alter what treatment approach you and your client ultimately chose to use. For example, cognitive-behavioral models will typically specify problem symptoms to be treated using a somewhat standard protocol. In contrast, solution-focused treatments will make use of individualized treatment goals based on the specific strengths and capacities of the client. Psychodynamic models may look for repetitive dilemmas in relationships, and specific behavioral changes may be understood in the context of improved self-awareness and self-understanding. Some family therapy approaches seek to alter the typical style of interaction or equilibrium of the family rather than to change specific behaviors. Many other examples of different practice models exist. What is essential to consider with each approach is how does it fit with

the needs and wishes of this client and how is it supported in the literature to address the specific goals identified by this client given her or his unique circumstances and characteristics.

Step 6: Implement the Intervention

The final step of the EBP process is to start the intervention. Documentation of session content and any evidence of intended changes should be included in the client's written record. Such documentation helps demonstrate that the intended intervention was properly and fully delivered. It also provides a running record of the client's participation and progress or regression. Again, any concerns the client's notes about the treatment should also be documented in the client's record. Monitoring and evaluation of practice are, of course, vital parts of all good clinical work.

How Practice Evaluation is Different from EBP

As we pointed out earlier, some authors include the formal evaluation of the intervention as a step of the EBP process (Gibbs, 2002). We take a different view. We think that evaluation of an intervention is an important and necessary part of any professional intervention. Ongoing evaluation of change, in addition to evaluation of improvement from the beginning to the end of treatment, is an integral part of a good clinical practice. However, evaluation of a single case is based on a very different research model than is the EBP. Single-subject or single-system research designs target changes in a specific client system treated by a specific clinician in a specific manner. They are very useful for demonstrating and documenting change. The EBP model, however, is usually based on large numbers of clients with very carefully defined problems who are randomly assigned to treatment or control or comparison groups. Evidence derived from unique single cases is not highly valued in most EBP research models. Nor is it highly valued in the systematic reviews of treatment outcomes that identify level 1 and level 2 treatments. For this reason, we encourage evaluation of each client's progress as a regular part of good professional treatment, but do not include it as a part of the EBP model per se. (We will explore this issue further in Chap. 10.)

Summary

These six steps make up the EBP practice decision-making model. In many respects the EBP model adds to professional practice the clear obligation to review and incorporate the best research evidence as part of the treatment planning process. The EBP model also adds to professional practice the clear obligation to engage the

client in active collaboration about the merits and limitations of a proposed treatment plan. Helping the client make a fully informed choice about treatment is a clear part of the EBP process. This last requirement is very fitting in today's increasingly diverse world. Note that several different forms of professional expertise are required to undertake the EBP model. At no point does evidence alone dictate a course of treatment. At no point is the client excluded from treatment planning model. In our view, EBP is not a simply "top-down" or expert practice model.

The EBP model can be used with any form of treatment, though currently much more research information is available to support cognitive-behavioral models than is available for most other treatments. Unfortunately, many treatment models have not yet been researched in a manner that fits with the EBP model. It is important to bear in mind that these treatment models have simply not been appropriately tested: lack of evidence does not mean that they are automatically ineffective.

The next chapter of this book explores the assessment models used in clinical social work practice. A good and thorough assessment is the foundation for applying the steps of the EBP practice decision-making model. The EBP model does not directly address assessment. Yet assessment starts and shapes EBP in practice and in research.

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