Evidence-Based Social Work: An Overview

Bruce A. Thyer

Chapter 1

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Learning Objectives

After reading this chapter, the reader will be able to:

- Understand the philosophical foundations undergirding the approach called evidence-based practice.
- Be able to articulate the major steps involved in the process of conducting evidence-based practice.
- Be able to describe the strengths and limitations of a scientific orientation to social work practice.
- Be able to locate valid sources of information regarding the effectiveness of various psychosocial interventions and methods of assessment suitable for applications to social work.

Overview of the Problem

The focus of this book is empirical research that has direct applications to social work practice and informs evidence-based practice. It is always useful to begin by defining one's terms, and in turning to the *Social Work Dictionary* (Barker, 2003, p. 141), we find that the word *empirical* means "based on direct observation or experience" and that *empirically based practice* is defined as:

> *A type of* intervention *in which the professional social worker uses research as a practice and problem-solving tool; collects data*

systematically to monitor the intervention; specifies problems, techniques, and outcomes in measurable terms; and systematically evaluates the effectiveness of the intervention used.

On the face of it, this description seems quite reasonable. Indeed, should it not be characteristic of *all* of social work practice? Well, the issues are more complicated. For example, some areas of social work practice suffer from a lack of ways to measure the phenomena of interest (which makes data gathering problematic). Others are more value based, such as the advocacy of pro-choice laws pertaining to abortion rights or of the rights of gays and lesbians to legally marry. Empirical research is not a particularly salient argument in such discussions.

Even more fundamentally, the very term *empirical* has been subjected to differing interpretations. For some, it means something to the effect of "If I can see it, it is real." Hence, if I can see improvement in my clients, then I can be pretty sure they are indeed getting better, and you should take my word for this. A problem with this approach is that sometimes individuals (e.g., social work practitioners, and even clients) can be deceived. The history of quack medicine and the explanations for ghosts, crop circles, flying saucers, and extrasensory perception demonstrate how easy it is for well-educated, informed, and even skeptical persons to unintentionally deceive themselves or to be intentionally deceived by the unscrupulous. And, to be fair, so does the history of science: Witness the discovery in 1989 of so-called cold fusion, or the revelations of fraud in the publication of revolutionary advances in cloning research.

Additional safeguards are necessary, beyond the level of personal observation, for a finding to be considered to be empirical. For example, Arkava and Lane (1983, p. 11) claim, "Empiricism is the process of using evidence rooted in objective reality and gathered systematically as a basis for generating human knowledge." Here the key word is *systematic,* which implies a method of observation that can be reliably communicated to others, who, in turn, can undertake essentially the same method of observation.

Grinnell (1993, p. 442) adds another dimension to the definition of empirical as "*knowledge* derived from observation, experience, or experiment," as does a common dictionary (Berube, 1991, p. 449): "*Empirical* a: relying upon or derived from observation or experiment, b: capable of proof or verification by means of observation or experiment." These latter definitions indicate that there is more to empiricism than simply relying on the evidence of the senses. For an observation to be called empirical it should be *systematic,* capable of being *replicated* (i.e., verified) by other individuals, and subject to some evidentiary standards of *proof.*

Empirical methods are also founded on several other not unreasonable philosophical assumptions, such as *realism,* which main-

tains "that the world has an independent or objective existence apart from the perception of an observer" (Chapin, 1975, p. 443), and *naturalism,* "the point of view which regards mental processes, attitudes, and other psychological processes as part of the system of natural phenomena and therefore interpretable according to natural laws" (p. 335). Under empiricism, explanations for phenomena are first sought via material causes that do not rely on supernatural or metaphysical mechanisms. This perspective is also the point of view known as *positivism,* "a philosophical and scientific position which holds that knowledge is limited to experience and to observed facts and that metaphysical questions concerning the nature of ultimate reality are outside the scope of science or philosophy" (p. 397). The term *positivism* is also defined by Rubin and Babbie (2005, p. 753) as "a paradigm introduced by August Comte that held that social behavior could be studied and understood in a rational, scientific manner—in contrast to explanations based in religion or superstition."

To reiterate, empiricism implies more than data obtained by the senses. Some level of evidence in support of the validity of these perceptions is required:

> *If experience is a necessary ingredient of social work methods, then one must find means of discovering whether that experience is valid; whether the interaction with another did, in fact, lead to desired changes in that person's behavior, attitudes, and so forth; whether the methods are sound; and whether the theories that inform the methods are sound. (Williams, 1995, p. 881)*

A synopsis of the philosophical foundations undergirding the approach called evidence-based practice is depicted in Table 1.1. Now, what does all this philosophy have to do with social work? Very much, as so ably articulated by Reamer (1993, 1994). Certain philosophical positions are intimately linked with the profession's values and ethics. Among these are the valuing of the methods of science and of empirically based methods. More on this later.

Since the publication of an earlier version of this book in 1998 (Thyer & Wodarski, 1998) there have been significant developments in the maturation of the concept of *evidence-based practice* (EBP). Evidence-based practice originated in medicine in the 1990s, and its principles have since proliferated exponentially over the past decade. A recent Internet search of evidence-based practice yielded more than 1.2 million hits on 15 February 2006, and the newest recent edition of the *Social Work Dictionary* (Barker, 2003, p. 149) included this term for the first time, defining it as:

> *The use of the best available scientific knowledge derived from randomized controlled outcome studies, and meta-analyses of existing*

Table 1.1 Some Selected Philosophical Principles Related to Evidence-Based Practice

An Endorsement of:

Realism: The point of view that the world has an independent or objective existence apart from the perceptions of the viewer

Determinism: The assumption that all phenomena, including psychosocial ones, have physical causes (as opposed to metaphysical ones) that are potentially amenable to scientific investigation and discovery

Positivism: The belief that valid knowledge about the objective world can be arrived at through scientific research

Rationalism: The belief that reason and logic are useful tools for scientific inquiry and that, ultimately, truthful or valid accounts of human behavior will be rational or logically understandable

Empiricism: A preference to rely on evidence gathered systematically through observation or experiment and capable of being replicated (e.g., reproduced and verified) by others, using satisfactory standards of evidence

Operationism: The assertion that it is important to develop dependent (e.g., outcome measures) and independent (e.g., social work interventions) variables that can be reliably used and replicated by others

Parsimony: A preference to seriously consider the simpler of the available and adequate explanations of a phenomenon prior to accepting a more complex account

Scientific skepticism: The point of view that all scientific claims (e.g., the claim that Treatment X helps clients) should be considered of doubtful validity until substantiated by credible empirical data

A Rejection of:

Metaphysics: Explanations involving supernatural, incorporeal, or immaterial entities or factors

Nihilism: The doctrine that all values are baseless and that nothing is known or can be learned

Solipsism: The view that there is no proof that anything exists outside the mind

Dualism: The view that the world consists of the two fundamental entities of mind and matter

Reification: Attributing reality status to an abstract or hypothetical construct (e.g., the superego) in the absence of credible evidence supporting the existence of that construct

Circular reasoning: A supposed (but actually illogical) explanation for human behavior in which causes and effects cannot be distinguished from each other (e.g., Bruce is an alcoholic because he drinks too much; he drinks too much because he is an alcoholic)

Scientism: The position that the investigational methods used in the natural sciences should be uncritically applied to *all* areas of social work practice and decision making

Source: Portions of this table appear in "Introductory Principles of Social Work Research" (pp. 1–24), by B. A. Thyer, in *The Handbook of Social Work Research Methods,* B. A. Thyer (Ed.), 2001, Thousand Oaks, CA: Sage.

> *outcome studies, as one basis for guiding professional interventions and effective therapies, combined with professional ethical standards, clinical judgment, and practice wisdom.*

This is reasonably accurate, but there is concern that much of the social work literature on EBP has relied on secondary sources, or even concepts completely at variance with its original formulations. Readers are encouraged to consult primary sources for learning about EBP, especially consulting the third edition of *Evidence-Based Medicine: How to Practice and Teach EBM* (Strauss, Richardson, Glasziou, & Haynes, 2005), which outlines this conceptual model in great detail. Strauss et al. define EBP as "the integration of the best research evidence with our clinical expertise and our patient's unique values and circumstance" (p. 1) and very clearly describe EBP as a *process of inquiry and practice,* and *not* as a set of practice techniques that have somehow passed a scientific litmus test as approved therapies. There is considerable conceptual confusion about this, perhaps engendered by a related initiative of the American Psychological Association, also undertaken during the 1990s, that was aimed at describing some research benchmarks by which psychosocial treatments could be evaluated (see Task Force on Promotion and Dissemination of Psychological Procedures, 1995); those that passed muster would be labeled as empirically supported treatments, or ESTs. Articles describing this process and actually listing interventions that met these minimal standards (roughly speaking, to pass an intervention must have been supported by the publication of at least two well-designed randomized controlled trials, or at least nine well-designed single-case evaluations). Reviewing the evidence and listing these ESTs was in some ways a good exercise (see Chambless et al., 1996,), albeit controversial (see Norcross, Beutler, & Levant, 2006), but one that did cause some people to conflate this initiative with the entirely separate but sympathetic EBP movement. According to Strauss et al. (2005), the process of EBP can be described by the following five steps to be undertaken by practitioners (regardless of discipline):

1. Convert one's need for information into an answerable question (e.g., What is helpful in the treatment of clients meeting the *Diagnostic and Statistical Manual of Mental Disorders* criteria for Panic Disorder?)
2. Track down the best evidence available to answer that question.
3. Critically appraise this evidence in terms of its validity.
4. Integrate this critical appraisal with one's clinical expertise and the client's circumstances, including biological variables and values and preferences.
5. Evaluate one's effectiveness in undertaking the prior four steps.

Strauss et al. (2005) devote chapter-length discussions to each of these steps. They explain how to formulate our information needs into answerable questions, usually including a client situation or problem, an intervention, and a clinical outcome. Considerable advances in computer and Internet technology have facilitated the finding of the best available evidence, with preference given to locating systematic reviews compiled by the Cochrane and Campbell Collaborations (www.cochrane.org and www.campbellcollaboration.org), international consortia dedicated to providing such comprehensive and systematic analyses, Cochrane in the general area of health care (including mental health) and Campbell in the areas of social welfare, criminal justice, and education. Other sources of information are examined, including recent issues of professional journals, and explicitly EBP-oriented journals, such as *Evidence-Based Mental Health* (see http://ebmh.bmjjournals.com).

One hierarchy of evidence to be considered in appraising the research literature related to the effectiveness of interventions, ranging from the most likely valid and credible to the least reliable (but still potentially valuable), follows:

- A systematic review of *all* available research, published and unpublished, written in English and in other languages, prepared by a group like the Cochrane or Campbell Collaborations (high end of reliable evidence)
- A meta-analysis
- Large-scale multisite randomized controlled trials
- An individual randomized controlled trial
- Quasi-experimental controlled trials
- Preexperimental trials
- Single-subject research designs
- Qualitative outcome studies
- Expert opinion or consensus standards (low end of reliable evidence, but still potentially informative)

Other factors are also relevant. For example, have results been replicated? Have they been replicated in independent investigations? Are the effects not only statistically reliable but also of sufficient magnitude (e.g., strong effect sizes) and clinical import (result in improved quality of life)? Is the intervention ethically acceptable (e.g., would castration for rapists be an acceptable intervention to reduce sex crimes)? Is the proposed intervention applicable to a particular client (e.g., is cognitive therapy for depression, an otherwise empirically supported treatment, appropriate for a person with an intellectual disability)? Is the proposed intervention acceptable to the client (e.g., is exposure therapy and response prevention, an otherwise empirically supported treat-

ment for Obsessive-Compulsive Disorder, appropriate for a nonpsychotic client who honestly believes that her obsessions are the results of demonic influences)? Obviously the process of EBP involves far more than the rote application of empirically supported treatments, although the latter are an important aspect of this approach.

To reiterate, armed with the findings from a critical appraisal of the existing literature, the social worker then judges their applicability to the client, his or her circumstances, the social worker's own clinical expertise, and professional values. Evidence-based practice does *not* involve the blind adoption into practice of interventions supported by randomized controlled trials, meta-analyses, or systematic reviews. It *does* require that the evidence available from such sources be considered in making practice decisions.

The balance of this chapter offers an overview and positive presentation of the fundamental principles of evidence-based social work practice. Beginning with selected philosophical assumptions, initially touched on in the preceding section, this chapter shows how these apply to all areas of practice in the field of social work and inform the development of evidence-based practice. Along the way, certain misconceptions about evidence-based social work practice are addressed and corrected.

First Principles

1. There Is an Objective Reality

Apart from accepting this statement as a philosophical assumption (assumptions are accepted as true, by their very definition as assumptions), there are strong logical and practice grounds supporting this principle. Millions of years ago, sentient beings called dinosaurs roamed the earth. These animals were aware of their surroundings; they ate, slept, procreated, and hunted—in other words, they *lived*. Now dinosaurs are no more, but the world continues on unabated—a changed world, granted, lacking dinosaurs, but its essential nature continues. In the future, should human beings become extinct, perhaps as the victims of some lethal viral plague, it seems reasonable that the physical structure of the world would similarly not be changed. It would continue its existence, independent of the perceptions of human beings. The dark side of the moon was unobserved by humans until a few decades ago. Did we doubt its existence prior to that time? Of course not.

The opposite of realism is *constructivism,* which has been defined as "the view that 'reality' or what we 'know' about the world and our experience of it, is a product of our own mental

processes rather than something that actually exists" (Gallant, 1994, p. 119). Constructivism itself is simply a reworking of the point of view known as *solipsism* (see Thyer, 1995a): "Whatever exists is a product of will" (Wolman, 1973, p. 352). And solipsism is itself derivative of a much earlier Greek philosophical school.

Although realism and constructivism are often seen as antithetical, they need not be. To accept realism is *not* to deny the possible merits of the solipsistic perspective. To state that the world has an independent or objective existence is not, on the face of it, to contend that subjective elements are irrelevant. Realism need not imply that the *only* reality is that which is objective and material, just that there *is* such a reality. Realism simply states that an objective and material reality is a very important piece of our universe. To claim, as do the constructivists, that the world is a social construction is certainly acceptable, as long as the position is that social constructivism may be *a part* of the universe, not the whole thing. To accept realism is not to deny the role of subjective elements as a part of the world. To accept constructivism need not be to deny the existence of an objective reality—witness the reaction of the constructivist who receives a speeding ticket while driving to the meeting of the Solipsism Society!

Those who label themselves empiricists, realists, or positivists delimit the scope of their inquiry to the material, the objective, to that which has an independent existence. To the extent that the problems addressed by social work practitioners contain a realistic, material, and objective reality, an empirical perspective is a useful one. Conversely, empirical research has little to say about those aspects of the world that are wholly subjective, immaterial, or supernatural. The study of these areas may form the subject matter of other disciplines, such as philosophy and religion.

2. Psychosocial Phenomena Are a Part of That Reality

As a practical matter, social workers accept this principle without too much debate. Few doubt that unemployment really exists out there in the world, that HIV disease is killing thousands, that spouses are being battered, and that children are being sexually assaulted. The phenomena labeled Bipolar Disorder are real (regardless of the current fad in diagnostic criteria) and exert their deleterious influences on the lives of clients and their families. Of course, there are gray areas: The validity of repressed memory syndrome, Multiple Personality Disorder, and Late Luteal Phase Dysphoric Disorder are a few examples. But the definition of Schizophrenia was similarly gray 100 years ago, and the widespread prevalence of child abuse and incest was barely guessed at then. Like the largely blank maps of Africa and Asia of 200 years ago, the gray areas of social work practice are slowly being pushed

back. Preliminary work gives way to more detailed investigations; initial impressions are corroborated or disconfirmed, new questions arise, and more accurate answers slowly emerge.

While these gray areas are being sorted out, the profession of social work is hard at work on those that are fairly unambiguous: working to eliminate racial discrimination and poverty, to promote economic self-sufficiency, to reduce the deleterious effects of so-called mental illnesses, and to deter domestic and community violence. Indeed, the empirical social worker can reasonably contend that virtually the entire focus of our discipline is on the objective reality of deleterious psychosocial environments and of people's reactions to those circumstances. Our field is charged with discovering, not the meaning of homelessness or of being abused, but what can be done to *eliminate* homelessness and to prevent abuse.

One of the seminal figures in social work practice and education had this to say on the matter:

> *At first glance it seems unnecessary to state that, if we believe in a* noncapricious and objectively reliable universe, *such belief also includes social and economic forces with which we can cooperate. Actually, we constantly deny this reliance on objective reality in favor of subjective fantasies. (Reynolds, 1963/1991, p. 315;* emphasis added*)*

And:

> *A second characteristic of scientifically oriented social work is that* it accepts the objective reality of forces outside itself *with which it must cooperate. (Reynolds, 1942, p. 24;* emphasis added*)*

Here, Bertha Capen Reynolds is unambiguously asserting that the universe is noncapricious and does have its own existence apart from our social constructions of it. The implications of this position are not trivial. A lawful universe contains the potential for meaningful and effective social work intervention, whereas a capricious one contains little hope for the value of structured social work interventions at the micro or macro practice levels. If the objective realities of poverty are either denied or seen as unimportant, then the focus of social work is on changing the *perceptions* of clients about the world in which they live. If the material world is viewed as real and important, then the focus of intervention is most fruitfully seen as improving the *objective circumstances* of people's lives—for example, in housing, employment, and safety—as opposed to their perceptions of these matters. Gutheil (1992) provides a nice summary of the importance of the physical realities of life in social work assessment and intervention, one that does not discount the psychological ones.

3. Knowledge of Psychosocial Phenomena *Can* Be Arrived At

In support of this principle, we can again cite Reynolds's (1963/1991, p. 315) commonsense views: "I believe that it is possible to understand scientifically the movement of social and economic forces and to apply our strength in cooperation with them." And well before Reynolds's views, we can turn to the proceedings of the National Conference on Charities from more than 100 years ago:

> *Most of the leaders of the conference accepted the implications of a scientific approach to social work problems. They acted on the tacit assumption that human ills—sickness, insanity, crime, poverty—could be subjected to study and methods of treatment. . . . This attitude raised these problems out of the realm of mysticism into that of a science. . . . As a result of the adoption of this scientific attitude, conference speakers and programs looked forward toward progress. . . . They believed in the future; that it was possible by patient, careful study and experimentation to create a society much better than the one they lived in. (Bruno, 1964, pp. 26–27)*

However, the subject matter for the professional social worker is perhaps more complex than that for any other discipline. We envy the chemist who mixes uncontaminated chemicals in a flask and always finds the same result; the experimental physicist who turns on the apparatus and obtains replicable observations; and the rocket scientist charged with designing a spacecraft to fly to Mars, who, perhaps after some initial failures, finally lands a probe on the surface of an alien planet. Such problems, daunting though they may be, pale in comparison to the prospects of finding a sufficiency of families to adopt orphans, of eliminating drug abuse, or of making the inner cities safer places to live. Try developing an *effective* program to ensure that the maximum number of persons with chronic mental illness can live independent lives; to encourage single mothers to get off welfare when there are no jobs to be had; or even to do something simple, like prevent high school dropouts. Ours is far and away the more difficult challenge!

Nevertheless, the complexity of our field does not shake the calm, confident belief that the phenomena with which we deal are grounded in a physical reality, are potentially capable of being understood, and are based on natural laws governing human behavior and biology. Arthur Todd's (1920, p. 73) prescient book, *The Scientific Spirit and Social Work,* had this to say on the matter: "It [science] does not deny that a thing exists merely because it is not easily seen." The empiricist sees no need to invoke metaphysical variables in the face of our current lack of understanding. We recognize that it is better to withhold judgment than to seize upon

spurious explanations. Outside of the laboratory, the physicist cannot predict where Forrest Gump's feather will fall, but this inability does not cause him or her to rush around invoking spirit entities or mental forces to explain what happens as the feather drifts down. Similarly, our present difficulties in explanation and prediction do not shake the faith (so to speak) that viable causal accounts are potentially achievable for even the most intractable personal and social problems our field deals with. Again, turning to Todd: "Science does not claim to have complete knowledge of the truth or to have established perfect order out of chaos in this world. It is less an accomplished fact than an attitude" (p. 71).

We can point to the considerable progress that has been made already. We now know much more than we did 50 years ago about the etiology of alcoholism, of the consequences of sexual trauma, and of the prevalence of domestic violence. And we know much more about effective psychosocial interventions (see the following chapters).

Mary Richmond (1917/1935, p. 53) asserted, "Thoughts and events are facts. The question whether a thing be fact or not is the question whether or not *it* can be affirmed with certainty." Richmond believed that some degree of certainty, and hence fact, *could* be arrived at. In fact, her entire text *Social Diagnosis* is an attempt to teach social workers a methodology to obtain as many facts in a case as possible and to make correct inferences from those facts. She lamented:

> *No considerable group of social caseworkers . . . seem to have grasped that the* reliability *of the evidence on which they base their decisions should be no less rigidly scrutinized than is that of legal evidence by opposing counsel. (p. 39)*

To rectify this, she devoted chapter after chapter to such relevant topics as the use of social evidence, bias in testimony, and making reasonable inferences, all operating on the assumption that objective knowledge of the psychosocial is possible.

The opposite of this principle is *nihilism,* "a doctrine that all values are baseless and that nothing is knowable or can be communicated" (Berube, 1991, p. 842). The very existence of the methods of science and of social work's application of these tools to make useful discoveries is a repudiation of nihilism.

It is often maintained that because research is conducted by human beings, who have their own set of values and beliefs, then by necessity the entire scientific enterprise is suspect (see Witkin, 1991, for one example of this position). This misses the point that science itself is intensely self-critical and has devoted extensive work to this very problem (e.g., Rudner, 1953). The answer lies in the ability of empirical findings to be effectively transmitted and replicated by others. As Gorenstein (1986, p. 589) noted:

> *It makes no sense to reject the potential scientific import of a construct simply because social values may have played some role in its formulation. The question of whether a construct has any scientific import is an empirical one. It has to do with whether the construct exhibits lawful properties.*

In science, the culture, politics, religion, race, or gender of the investigator have little to do with the merits of what his or her research uncovers (although how the results are used is another matter). This is actually a great strength of the empiricist position. Entertain the opposite stance, and you have the Nazis burning the books of Einstein because he was Jewish, racists denigrating the agricultural research of George Washington Carver because he was Black, and chauvinists dismissing the findings of Marie Curie because she was a woman. Social work professor Leon Williams (1995, p. 881) summed this principle up well:

> *Social work must assume, for the sake of epistemology, that the field can attain certain, if not valid, knowledge about the human condition. To settle for something equal to or less than probable knowledge is to settle for knowledge dictated by dogma and naive belief, and that appears untenable in an applied discipline.*

Does it (should it?) make any difference to you, the reader of this text, to learn that Mary Richmond was a White woman, or that Leon Williams is an African American man, in your appraising the views these scholars expressed or their research findings? Of course not.

4. Scientific Inquiry Is the Most Reliable Way to Arrive at Valid Knowledge

The previous sections have hinted at this principle, but it is worthy of being explicitly stated. Although the word *scientist* is barely 150 years old, the methodological tools of empirical science have proven to be an extremely valuable method for discovering facts about the world. Conventional scientific inquiry covers a multitude of methodologies, including both qualitative and quantitative approaches. Science is intensely self-critical and is constantly evolving, incorporating new methods and discarding outmoded ones. Again, there are historical precedents for this view within social work: "Science always moves on. The charitable methods of twenty years ago may be utterly obsolete now. Our methods, even the most scientific, may be the laughing stock of our descendants in the twenty-first century" (Todd, 1920, p. 85).

Field research, naturalistic observations, participant-observation studies, correlational investigations, surveys, longitudinal studies, quasi-experiments, single-system research designs,

randomized controlled trials, and meta-analyses are all subsumed under the rubric of empirically based science. No subject or problem in social work is inherently excluded from scientific analysis, although some things are certainly more difficult to investigate than others. The edifice of conventional empirical science employs a multitude of methods, qualitative and quantitative—those that investigate linear, simple, causal phenomena, and those that are applicable to the analysis of complex, multiply determined, interactive psychosocial systems. As long as the phenomenon in question is seen as occurring (at least in part) in the material, physical world in which we live, then science can investigate it. As long as the methodology is systematic and replicable and possesses verifiable standards of proof, it is a welcome member of the community of scientific methods. It took Jane Goodall seeing only *one* chimpanzee eating meat in the wild to disconfirm the then current hypothesis that chimps are naturally exclusively vegetarian. Such field observational studies are a valuable tool in science. When others see the same thing in different settings, or when videotapes can be made of the event, naturalistic observational studies are granted even stronger credence. At the other end of the hierarchy (or rainbow, if you prefer) of scientific research methods is the multinational randomized controlled clinical trial, conducted by diverse investigators with disparate clients (e.g., with respect to such characteristics as race, gender, and age), which obtains replicated results.

All types of research methodologies are not given equal credence, however. Evidence obtained from a well-conducted randomized controlled clinical trial is seen as more persuasive than an individual case history presented narratively. Studies with long-term follow-up are seen as better tests of a treatment's efficacy than those that assess clients only immediately posttreatment. Correlational studies with thousands of respondents are seen as more credible than those using only 10 people, and replicated studies are seen as more reliable than unreplicated ones (see Thyer, 1989, 1991). Both qualitative and quantitative research methods have a valuable function in mainstream science. In general, qualitative methods are very useful for learning about a specific problem area or clientele and for generating hypotheses or meaningful questions. Quantitative methods are, in turn, most useful for developing *answers* to questions once they have been formulated, but they are not particularly strong for originating theory or generating hypotheses.

No research methodology is without its problems. In 1925, anthropology student Margaret Mead traveled to Samoa to learn something of the realities of adolescent life there. Using a qualitatively based participant-observation methodology and two key informants, teenage girls who served as her translators during her long-term stay, Mead came away with a view of Samoan adolescence characterized as being sexually uninhibited, anxiety-free,

and generally without stress. Her work culminated in the popular book *Coming of Age in Samoa* (Mead, 1928). It was not until the 1980s that it emerged that Mead had been hoaxed by her informants, who had decided to play a trick on her and basically told her what they thought she wanted to know, and that quantitative data (e.g., statistics on juvenile crimes) failed to corroborate Mead's findings (see Gardner, 1993).

In 1989, chemists in Utah announced the discovery of cold fusion, a potential source of limitless energy. Within a few weeks, leading research laboratories across the world announced their replication of the cold fusion phenomenon. However, a few naysaying voices emerged, claiming alternative explanations for the chemical phenomenon in question, and over several months, it slowly became clear that the detractors were correct. The claims of cold fusion were erroneous (see Rothman, 1990).

One would have hoped that the length of Mead's stay in Samoa would have revealed the truth to her, and that their detailed knowledge of the laws of physics would have deterred the inventors of cold fusion (see Taubes, 1993) from making premature claims about their supposed energy source—but such are the vagaries of science, no matter what method is employed, whether the anthropologist's field study or the chemist's laboratory experiment. The process of scientific inquiry, though, tends to preclude errors from being perpetuated in the long run and allows the truth to emerge. This self-corrective feature is not characteristic of other ways of knowing, such as divine inspiration, reliance on prior authorities, intuition, or even practice wisdom. Science provides a manner—empirical research—to resolve conflicting views; revelation and other approaches to discovery do not. This is a distinctive strength of scientific inquiry.

The field of social work has long recognized this. So much so, that the Code of Ethics of the National Association of Social Workers (NASW; 1996 p. 20) clearly states, "Social workers should base practice on recognized knowledge, *including empirically based knowledge,* relevant to social work practice." Twenty-five years ago the Curriculum Policy Statement of the Council on Social Work Education (CSWE; 1982, p. 10) mandated, "Every part of the professional foundation curriculum should . . . help bring students to an understanding and appreciation of the scientific, analytic approach to knowledge building in practice. The ethical use of scientific inquiry should be emphasized throughout." The CSWE's statement has been superseded by its Educational Policy and Accreditation Standards, which reinforce this earlier standard: "The content prepares students to develop, use, and effectively communicate empirically based knowledge, including *evidence-based interventions*" (CSWE, 2001, p. 10; emphasis added).

One of the seven original organizations that formed the NASW was the Social Work Research Group (SWRG, established in 1949),

which adopted the positivist philosophy of science as its guiding research paradigm (see Tyson, 1992, p. 542). When the NASW was founded in 1955 (incorporating the SWRG Research Section), the new organization's bylaws proclaimed that one of its major purposes was "to expand through research the knowledge necessary to define and attain these goals" (e.g., to improve conditions of life; NASW, 1955, p. 3). Numerous early articles and books in social work valued the methods of science and the potential that empirical research possessed to be of benefit to the field and to society (e.g., Gordon, 1956; Preston & Mudd, 1956; Todd, 1920; see Zimbalist, 1977, for a summary). In 1880, Charles D. Kellogg of the Philadelphia Charity Organization believed, "Charity is a science, the science of social therapeutics, and has laws like all other sciences" (quoted in Germain, 1970, p. 9). Though perhaps an overstatement, Kellogg's sentiment expresses the optimistic empiricist Zeitgeist surrounding the establishment of the social work profession.

To reiterate: To claim that empirical methods have much to contribute to developing advances in knowledge and practice in social work intervention is not automatically to deny the role of alternative ways of knowing. Rather, it is the responsibility of the advocates of methods of discovery that are outside of mainstream science to demonstrate the value of those other approaches. Neither does science inherently claim that issues that fall outside its purview are unimportant or meaningless to others. Love, altruism, faith, beauty, commitment, courage, and hope are all of vital significance to humanity. For science to say that it does not address such topics is not to say that they are insignificant. Thyer (1993, p. 6) stated it this way:

> *Many questions of great importance to our profession, such as the value base of social work, are simply outside the purview of scientific inquiry and other standards apply to the discussion of such topics apart from the conventional rules of scientific inference, standards such as those pertaining to religious beliefs, morality, and other philosophical convictions. Logical positivists are fully aware that many significant areas of our professional and personal lives should not be scrutinized through the lenses of science, but when the issues relate to social work theory and the evaluation of our practice methods, the role of controlled scientific investigations . . . becomes a relevant factor.*

5. There Are Some Good Methods to Measure Psychosocial Phenomena

Bloom, Fischer, and Orme (1995, p. xiii) have done us a service by uncovering an important quote from Dr. Richard Cabot, who addressed a national social work convention in 1931: "I appeal to you. . . . Measure, evaluate, estimate, appraise your results, in

some form, in any terms, that rest on something beyond faith, assertion, and 'illustrative cases.' "

A major obstacle to the conduct of quality empirical research in social work was the lack of suitable measures. Preston and Mudd (1956, p. 36) asked (and answered): "What is preventing progress in the identification of factors contributing to positive [results] in social casework? First is the fact that movement indices, while reliable, have not yet been shown to be valid." This was a problem similarly noted by Gordon (1956, p. 82): "Social workers have . . . felt the lack of more systematic and objective means of making these observations . . . and with methods that make them more than individual impressions." Mary Richmond (1917/1935, p. 362) provided one partial solution to this problem when she claimed, "To state that we think our client is mentally deranged is futile; to state the observations that have created this impression is a possible help." In other words, be parsimonious in description, keep unwarranted inferences to a minimum, and report what actually occurs, as opposed to interpreting what is seen.

As it happens, considerable progress has been achieved in developing both reliable and valid measures of client progress. K. Corcoran and Fischer's (2000) sourcebook contains several hundred rapid assessment measures covering the panoply of fields of clinical practice: children, adults, families, and couples. Many of these reliable and valuable instruments are of great value in supplementing clinical judgment in social work assessment and in monitoring change during the course of intervention. An increasing number of similarly constructed sources is available to agencies and practitioners (e.g., National Institute on Drug Abuse, 1994; Nezu, Ronan, Meadows, & McClure, 2000; Sederer & Dickey, 1996; Wetzler, 1989). Apart from formal pencil-and-paper, client-reported, and rapid assessment instruments, corresponding advances have been made in systematizing the direct observation of behavior in its natural contexts (e.g., Baer, Harrison, Fradenburg, Petersen, & Milla, 2005; Polster & Collins, 1993).

Occasionally, one encounters a colleague who asserts, "Well, you just can't measure problem *X.*" Smile on hearing remarks like this and gently inquire, "Well, do you mean that X can't *ever* be measured, by anyone? Or do you mean that *you* do not know how to measure X now?" Modesty usually compels the naysayer to back up a bit and acknowledge that the latter position is what was really meant. In point of fact, most of the psychosocial problems dealt with by social workers *have* had some form of reliable and valid method of assessment developed. Perhaps these methods do not cover every area, or are not evenly distributed across fields of practice. Depression, for example, enjoys a much richer assessment literature than does, say, Multiple Personality Disorder, and clinical social work practice has a more developed empirical assessment methodology than does community organization. But an operating

assumption of the empirical social worker is that if a problem (or strength) exists in the real world, it is potentially measurable. And if it is measurable, we are in a better position to offer intervention services and to see if we are helping the client-in-situation. I once heard, "If you don't measure it, then you don't care!"

This does not disregard the unfortunate fact that our measures are often imperfect and require improvement. The national census undercounts illegal immigrants, racial minorities, and the homeless. Yet what alternatives are there to the census? What other database shall we rely on to estimate the numbers and characteristics of the citizenry? Clearly the answer is to improve the technology for taking the census, not to stop counting people. Similarly, ways to measure unemployment, the rate of inflation, the cost of living, and the quantity and quality of a client's Affective Disorder all suffer from varying degrees of imperfection. Like astronomers' calculations of the mass of the universe, the social work-related disciplines are getting better and better at assessing the psychosocial problems of clients. The measurement of clinical anxiety is considerably advanced over the techniques of 2 decades ago. Similar progress has been made in the analysis of social support, expressed emotion, caregiver burden, quality of life, and degree of independent living. Can these constructs be measured perfectly, in a manner completely isomorphic with nature's reality? Probably not. Are we coming progressively closer to capturing nature's reality? Most definitely!

6. There Are Some Empirically Supported Interventions

This is a really exciting area of social work practice—the ongoing development of psychosocial treatments that have been shown, through credible scientific evaluation studies, to *really* be of help to clients. Perhaps not for every client with a particular difficulty, and perhaps not to the point of complete resolution or cure, but for many problems we are in a position to offer professional social work services that are quite likely to benefit a significant proportion of our clients to a clinically meaningful extent. Indeed, the balance of this text provides summaries of this practice-research literature, so the point will not be belabored here. Rather, note that the American Psychiatric Association (1995), the American Psychological Association (Chambless et al., 1996; Task Force, 1995), and the NASW are at work developing practice guidelines as to what treatments are first indicated for particular problems (Ewalt, 1995). The American Psychological Association is making careful compilations of psychosocial interventions that work for particular disorders (see Sanderson & Woody, 1995), and this information will have an increasing influence on the conduct of practice.

In all the human services, it is becoming increasingly evident that some psychosocial treatments are effective for particular problems and some are not. A number of books summarize these findings, such as Giles (1993); Ammerman, Last, and Hersen (1993); the Institute of Medicine (1989); Nathan and Gorman (2002); Christophersen and Mortweet (2001); Drake, Merrens, and Lynde, 2005; Hibbs and Jensen (1997); and Hofmann and Tompson (2002), as do recent articles in social work, notably Gorey (1996); MacDonald, Sheldon, and Gillespie (1992); Rubin (1985); Thyer (1995b); Gorey, Thyer, and Pawluck (1998); and Reid and Hanrahan (1982). This is delightful news that should be shouted from the rooftops. Contrary to the nihilistic view that "virtually any intervention can be justified on the grounds that it has as much support as alternative methods" (Witkin, 1991, p. 158), numerous outcome studies comparing various forms of psychosocial treatment find that some types of interventions work better than others for particular problems. Consult any recent issue of *Research on Social Work Practice,* the *Journal of Consulting and Clinical Psychology, Evidence-Based Mental Health,* or the *Archives of General Psychiatry* for evidence of this contention.

7. We Have a Professional Obligation to Apply This Knowledge

Once the preceding principles have been established, it follows quite naturally that we should be obliged to apply this knowledge. Indeed, it would be premature to assert this, had the appropriate empirical foundations not been established. Now that our field has sufficiently progressed, the following position set forth over 25 years ago by two social workers is a reasonable one: "The clinician would first be interested in using an intervention strategy that has been successful in the past. . . . When established techniques are available, they should be used, but they should be based on objective evaluation rather than subjective feeling" (Jayaratne & Levy, 1979, p. 7).

Although, in K. J. Corcoran's (1998) analysis, jurisprudence has not yet established that social work clients have a legal right to effective treatment, Myers and Thyer (1997) argue that the ethical right certainly does already exist. Note that the principle is not that clients are guaranteed to benefit from social work intervention, but is rather the more limited concept that they have the right to *receive* treatment with some credible degree of support as a first-choice therapy, whenever such is available.

The right to receive effective treatment is being convincingly argued in a number of human service disciplines. In psychiatry, Klerman (1990, p. 417) states, "The psychiatrist has a responsibility to use effective treatment. The patient has a right to proper treatment. Proper treatment involves those treatments for which

there is substantial evidence." This view came to be known as *evidence-based psychiatry* (see Goldner & Bilsker, 1995), itself morphing into evidence-based practice.

In behavior analysis it is asserted that "the individual has the right to the most effective treatment procedures available" (Van Houten et al., 1988, p. 113), and an organization called the International Association for the Right to Effective Treatment has been formed. Behavior analysts make an especially strong case in this regard, with their professional Code of Ethics asserting:

> *The behavior analyst always has the responsibility to recommend scientifically supported most effective treatment procedures. Effective treatment procedures have been validated as having both long-term and short-term benefits to clients and society. . . . Clients have a right to effective treatment (i.e., based on the research literature and adapted to the individual client). (Bailey & Burch, 2005, pp. 65–66)*

In clinical psychology, Chambless et al. (1996, p. 10) claim:

> *Whatever interventions that mysticism, authority, commercialism, politics, custom, convenience, or carelessness might dictate, clinical psychologists focus on what works. They bear a fundamental ethical responsibility to use where possible interventions that work and to subject any intervention they use to scientific scrutiny.*

And in social work, Tutty (1990, p. 13) suggests, "It is important to provide the most effective treatment available. This entails professionals keeping current on the research on treatment effectiveness for their particular client populations."

Whereas it would have been premature to assert this principle some 20 to 30 years ago, each new advance in clinical-research knowledge adds weight to the argument in favor of the right to effective treatment. This view is consistent with practice wisdom, with the NASW Code of Ethics, and with the accreditation standards of the CSWE. What are the merits of the alternative perspective?

8. We Have a Professional Obligation to Empirically Evaluate the Outcomes of Our Interventions

The need for social workers to regularly evaluate the outcomes of practice at all levels has long been recognized in the profession. This principle is codified in the NASW's (1996, p. 20, section 5.02(a)) Code of Ethics, which states, "Social workers should monitor and evaluate policies, the implementation of programs, and practice interventions."

In the furtherance of this principle, the CSWE's (1982, p. 11) Curriculum Policy Statement mandated:

> *The content on research should impart scientific methods of building knowledge and of evaluating service delivery in all areas of practice. It should include quantitative and qualitative research methodologies; designs for the systematic evaluation of the student's own practice; and the critical appreciation and use of research and of program evaluation.*

The CSWE's (2001) more recent governing document, the Educational Policy and Accreditation Standards, embodies the following standards that all BSW and MSW programs must adhere to:

- *Social work education combines* scientific inquiry *with the teaching of professional skills to provide* effective and ethical *social work services. (p. 3)*
- *[Social work education] prepar[es] social workers to* evaluate *the processes and* effectiveness *of practice. (p. 7)*
- *[Social workers] use theoretical frameworks supported by* empirical evidence *to understand individual development and behavior. (p. 9)*
- *[Social workers] evaluate research studies, apply research findings to practice, and* evaluate their own practice interventions. *(p. 9)*
- *Practice content also includes identifying, analyzing, and implementing* empirically based interventions *designed to achieve client goals; applying empirical knowledge and technological advances;* evaluating program outcomes and practice effectiveness. *(p. 12)*
- *Qualitative and quantitative research content provide[s] understanding of* scientific, analytic, and ethical approaches *to building knowledge for practice. The content prepares students to develop, use, and effectively communicate* empirically based knowledge, *including* evidence-based interventions. *(p. 12)*

The position on evidence-based practice articulated in this book is highly consistent with contemporary educational standards for the training of social workers.

The lack of research designs appropriate for clinical and program evaluations was keenly felt in our profession's early years. Preston and Mudd (1956, p. 36) noted in the inaugural issue of *Social Work* (NASW's flagship journal), "Much technical work remains to be done before even the most elementary of experimental designs can be applied." Field research on naturalistic social work services does not lend itself to the strictures of classical experimental research designs. It is almost always impossible to randomly *select* a sample of clients from the larger

population of those with a particular psychosocial problem, and random *assignment* to treatment and no-treatment or placebo-control groups is equally problematic. Obtaining enough clients to allow for sufficient statistical power of inferential tests is also a difficulty.

To some extent, these problems have been dealt with pragmatically. For example, if we scale back our expectations and standards so that we limit initial investigations to answering the question "Did our clients get better after receiving social work services?" then nonexperimental designs such as pre- and posttest group studies on convenience samples of individuals are quite adequate to the task. Asking practitioners to provide credible answers to the question "Did social work intervention *cause* your clients to improve?" requires the imposition of rigorous experimental designs and may be an impractical endeavor. Asking the less rigorous but still important question "Did they get better?" is usually a far more feasible endeavor.

The development and application of single-system research designs (SSRDs) is another major positive development. About a dozen social work books have been published on the topic in the past 2 decades, as well as several hundred journal articles discussing and applying the approach (see Thyer & Thyer, 1992). Social work generalist research texts now regularly include one or more chapters on the conduct of SSRDs, and evaluation research making use of this methodology, representing a variety of practice and theoretical orientations, has appeared in all the major social work professional journals.

Concomitant advances have been made in the design and conduct of group research designs. The number of such published studies is growing exponentially. In Gorey's (1996) review, more than 85 outcome studies on social work practice appeared in print from 1990 to 1994. Contrast this to the *total* of 17 found by Fischer (1976) that appeared prior to 1972. More sophisticated statistical procedures such as meta-analysis permit the aggregation of group outcome studies, enhancing the power to detect changes in client functioning (see J. Corcoran & Dattalo, in press; Gorey, 1996; Gorey et al., 1998).

Conducting evaluation research in social work is perhaps our field's most challenging endeavor (Harrison & Thyer, 1988). However, students and practitioners are now being exposed to the practical tools necessary to undertake such evaluations (they weren't before), and the profession's Code of Ethics mandates such work (previously it did not). Outcome studies can be profitably undertaken by individual clinicians focused on individual clients, by administrators supporting program evaluations of the results of particular agency-based services, and by policy makers and legislators expecting some evidence of effectiveness. Soon, it is to be hoped, a stronger standard will be adopted by the profession, perchance one that reads something like this:

> *Clinicians should routinely gather empirical data on client's relevant behavior, affect, and reports of thoughts, using reliable and valid measures, where such measures have been developed. These measures should be repeated throughout the course of treatment and used in clinical decision-making to supplement professional judgments pertaining to the alteration or termination of treatment. (Thyer, 1995c, p. 95)*

9. We Have a Professional Obligation to Promote Evidence-Based Practice

There are a number of points of leverage that social work professionals can utilize to promote empirical practices in the field (see Thyer, 1995c, 1996b). Practitioners can, of course, focus their continuing education training on acquiring skills in psychosocial treatments and methods of assessment that are well supported by sound research studies. Educators can commit themselves to transmitting the latest findings of empirical research in their classes and field supervision and can require their students to develop skills in applying such methods in practice. Supervisors can ask personnel to gather data on client functioning, graph it, and bring it to supervisory sessions, where it can be used to form a part of the supervisory process. On a macro level, we can all work within the NASW and our state regulatory boards toward the adoption of an ethical standard such as the following:

> *Clients should be offered as a first choice treatment, interventions with some significant degree of empirical support, where such knowledge exists, and only provided other treatments after such first choice treatments have been given a legitimate trial and shown not to be efficacious. (Thyer, 1995c, p. 95)*

As social workers increasingly fall under the mandates of approved practice guidelines (see Ewalt, 1995) our profession should be at the forefront of ensuring that these standards are consistent with current clinical research findings.

Such ideas are not without some precedent. In 1992, the NASW's National Committee on Lesbian and Gay Issues (NCOLGI) developed a policy statement on therapies intended to convert gay men and lesbian women into heterosexuals. In part, this document reads as follows:

> *Proponents of reparative therapies claim—without documentation—many successes. They assert that their processes are supported by conclusive scientific data, which are in fact* little more than anecdotal. *NCOLGI protests these efforts to "convert" people through irresponsible therapies. . . . Empirical research does not demonstrate that . . . sexual orientation (heterosexual or homosexual) can*

> *be changed through these so-called reparative therapies. (p. 1;* emphasis added*)*

Reparative therapies have been deemed unethical, in part because of the lack of appropriate empirical research. This is a remarkable position to take. Is it much of an extrapolation to infer that providing treatments that are not empirically supported for other problems—say, depression or anxiety—is also unethical? Particularly if effective treatments *have* been developed for those problems?

Once the profession has adopted on a wide scale the standard that the provision of treatments that are not empirically supported may be unethical (where such treatments are known to exist), and the legal right to effective treatment is also established, then a natural Darwinian process will result in the gradual elimination of the ineffective and unproven and the adoption of the efficacious. This will not be easy, and it will be slow, accompanied by the agonized lamentations of practitioners of spurious therapies and of those having to learn newer and more helpful psychosocial interventions that will perhaps be at variance with long-cherished practices.

In 1915, Abraham Flexner claimed that social work did not meet two requirements to be considered a profession: It lacked individual responsibility and educationally communicable techniques for practice (Syers, 1995). The movement toward empirical social work addresses these two deficiencies. The expectation for the ongoing evaluation of practice partly deals with the first, and the growing body of transmittable psychosocial interventions described in the balance of this book addresses the second. Flexner's 1910 report *Medical Education in the United States and Canada,* commissioned by the Carnegie Foundation for the Advancement of Teaching, sounded a clarion call for medicine to become a scientifically based field. Homeopathy, naturopathy, and other bogus health practices slowly were excluded from the medical school curriculum and from everyday practice. Today, the social work equivalents of homeopathy and naturopathy are routinely taught in schools of social work and are presented as credible treatment options in practice textbooks and in continuing education programs. As long as this continues, Flexner's mournful conclusion will remain valid. Fortunately, the tide seems to be turning.

Summary

It is almost superfluous to ask why social work should take on the character of science. It is hardly a question of "may or may not." Rather, should we say, it is a matter of the categorical *must* (Todd, 1920, p. 75).

It is clear that contemporary social work accepts the principles of conventional scientific inquiry. However, empirical clinical practice is not an uncritical embrace of the quantitative to the exclusion of the qualitative. We remain aware of the limitations of science and attempt to base our practices on a firm integration of the scientific *with* the art of social work. To the extent that empirical research yields information that is reliable, valid, and applicable, it is incumbent on social workers to make use of these advances in knowledge in a manner that remains consistent with those equally important foundations of practice that are not empirically justifiable: respect for the individual, a concomitant focus on individually based and societally directed interventions, and the promotion of self-determination and social justice (Thyer, 1996a).

One of the best tools to promote the values of the profession is evidence-based social work practice. Telling the truth is one of those values (Reamer, 1995, p. 897), and discovering the truth is something that empirical research is very good at. The balance of this book presents credible reviews of contemporary empirical literature pertaining to selected behavioral, affective, and intellectual disorders and their psychosocial assessment and treatment. That such a book is now possible is a striking affirmation of the merits of the approach to social work called evidence-based practice.

Study Questions

1. Describe any two philosophical principles that evidence-based practice accepts as givens.
2. Describe any two philosophical positions that evidence-based practice largely rejects.
3. What is meant by the term *positivism*?
4. Why does science place more reliance on certain forms of research evidence (e.g., controlled experiments), as opposed to other forms that are generally seen as less capable of yielding credible findings (e.g., a narrative case history)?
5. What does the Council on Social Work Education assert with respect to the place of scientific training for social work students?
6. Look up the web site of either the Campbell Collaboration or the Cochrane Collaboration. Locate a systematic review of some psychosocial intervention relevant to social work practice, and examine how this review was conducted and what the authors conclude.

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