

CHAPTER 1

Learning to Apply Research

Why Bother?

Susan is a beginning therapist working with the Robinson family. The family is seeking treatment because Michael, who is 14, was caught shoplifting. Susan feels like the family is challenging and resistant to her suggestions for change. In class, Susan reads a qualitative study that describes how families being treated for adolescent drug abuse experience family therapy (Kuehl, Newfield, & Joanning, 1990). In their discussion of the results, the researchers commented that families could encounter “therapist resistance,” which occurs when therapists become insistent in promoting their agenda for therapy despite the family’s reservations. After reading this article, Susan began to wonder if she is exhibiting therapist resistance. In her next session, Susan spends more time joining with the family and asking how they thought therapy should proceed. After this session, Susan begins to reformulate an approach that is more consistent with the family’s view of the problem. She soon discovers that movement is beginning to happen in therapy.

Susan’s experience illustrates the power of research to inform and improve our therapy. Unfortunately, many clinicians do not take full advantage of the benefits research has to offer. One reason for this is that many therapists are not taught the required skills for using research clinically. Their introduction to research typically focuses on research designs and statistics, with little or no instruction on how these concepts might be applied clinically. Although a basic knowledge of research designs and

statistics is necessary, it is often not sufficient if one is going to take the next step and use research to inform one's clinical work. Therefore, our goal in writing this book is twofold. First, we want to provide you with the essential knowledge of research that you will need as a clinician. Second, and equally important, we want to give you the skills you need to apply research clinically through evidence-based practice. Both are necessary if you are going to realize the full potential that research has to offer for enhancing your clinical effectiveness. Before describing the book in more detail, let us explore in more depth why applying research to clinical work can be valuable.

WHAT IS RESEARCH (AND WHY SHOULD I CARE)?

Do you want to be the most effective practitioner you can be? If you answered yes, then you will be interested in learning how to apply research to your clinical work. At its most basic level, research is simply about gaining knowledge. Figure 1.1 shows the multiple ways we can acquire clinical knowledge, which includes learning from theory, supervision, life experience, and clinical experience. This book will teach you how to use research to enhance your clinical knowledge.

In a press conference during the war with Iraq, Secretary of Defense Donald Rumsfeld stated, "There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know." This quote suggests the different ways that research can inform our knowledge (Williams, Patterson, & Miller, 2006).

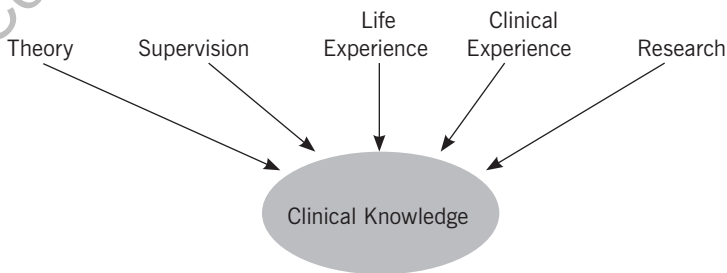


FIGURE 1.1. Sources of clinical knowledge.

First, research can confirm our known knowns. In other words, it can help us confirm something that we suspect is true based on knowledge we have gained through clinical or life experience. When Cassandra read about emotionally focused therapy, she found that it deeply resonated with how she worked with couples. When she discovered that it was an empirically supported treatment, she had greater confidence in her approach with couples.

Second, research can help us learn something we don't know. Research can help you answer the known unknowns in your clinical work. Nyasha was recently assigned Owen, a 14-year-old boy with a diagnosis of autism spectrum disorder. Recognizing her lack of knowledge regarding Owen's disorder, Nyasha reviewed some of the empirical research on treating autism spectrum disorder. She learned the importance of strengthening social skills in treating this disorder and incorporated this information into her treatment with Owen.

Third, research can help us identify what we don't know. It is not uncommon for research to raise new questions in addition to providing new insights. As a result, research can sometimes illuminate what we don't know. Therapists can experience this same phenomenon in their clinical work. Isabella was fairly confident that she could help a recently engaged couple address problems in their relationship. Eve had discovered from a friend that Dominic had bought an engagement ring several months before, but never proposed to her. Eve referred back to this several times when discussing her concerns in therapy. During the course of treatment, Isabella read an article by Johnson, Makinen, and Millikin (2001) that studied treatment failures in emotionally focused therapy. In analyzing these treatment failures, the authors frequently found an event that the couple seemed to have difficulty getting past, which the authors labeled as an attachment injury. Isabella recognized that Eve's discovery of the ring and Dominic's failure to propose had created an attachment injury for her. Isabella was unaware of attachment injuries prior to reading this article, one of her unknown unknowns. Using the model proposed in the article, Isabella helped the couple work through the attachment injury, which led to a successful outcome in therapy. This experience reinforced for Isabella the need to read research to expand her knowledge, including learning about things of which she was unaware.

However, research can be invaluable in a fourth way that is not evident from the Rumsfeld quote. Research can also disconfirm something that we believe to be true. As a beginning therapist, Ricardo believed

that if you helped couples reduce conflict in their relationship, they would automatically become closer. However, research by Gottman and Gottman (2008) suggests that developing positive behaviors and reducing conflict seemed to be governed by different processes. This helped Ricardo recognize that a different set of interventions was necessary to build a couple's closeness beyond just reducing conflict.

Beyond these general ways of adding to our knowledge, research can inform assessment and treatment in more specific ways (Williams et al., 2006). First, research can help us better understand our client's experiences, which may be particularly helpful if we have not had a similar experience. Even if we have had something similar happen to us, our reaction may have been quite different from our client's. Knowing the research may teach us not to assume that our experience is the same as our client's. Qualitative research can be particularly useful in providing a description of how clients experience certain phenomena. For example, one qualitative study provided a rich description of how clients responded to the disclosure of an affair (Olson, Russell, Higgins-Kessler, & Miller, 2002). Having a better understanding of our client's experiences through research will enhance our assessment, joining, and credibility.

Second, research can help guide our assessment by informing us of important factors that are related to disorders or problems we encounter in therapy. Poor family conflict management, poor parental monitoring, caregiver psychopathology and drug abuse, association with deviant peers, and poor socialization skills are among the many factors that research has indicated are related to conduct disorder in youth (Henggeler & Sheidow, 2003). Therefore, these would be important areas to assess when addressing youth with this diagnosis.

Third, instruments developed for research purposes may be useful in clinical assessment. A classic example is the Dyadic Adjustment Scale (Spanier, 1976), which is a widely used instrument in research for measuring marital adjustment. The Dyadic Adjustment Scale has also been used extensively in clinical settings to assess relationship or marital quality among couples.

Fourth, research can inform which treatment approach will be effective with a particular problem. For example, a therapist who works with couples in marital distress may choose to use one of the empirically supported treatments for couple therapy such as emotionally focused therapy or behavioral couple therapy (Johnson, 2003). We will discuss the use of empirically supported treatments in therapy in greater detail in Chapter 16.

Fifth, research can also help identify which elements of a treatment are important to its success. Common factors may emerge when comparing the results of different kinds of treatment. For example, several clinical researchers who have developed family-based treatments for schizophrenia reached a consensus on treatment principles that can guide therapists working with families with a member who has schizophrenia (McFarlane, Dixon, Lukens, & Luckstead, 2003). Process research (see Chapter 7) can also help us identify the key ingredients to bring about change. For example, one study demonstrated that softening events are associated with positive outcomes in emotionally focused therapy (Johnson & Greenberg, 1988).

One could argue that enhancing our clinical knowledge through research is an ethical responsibility. When we seek treatment from a medical professional, we certainly hope the physician has the latest knowledge regarding the most effective treatments for our particular illness or problem. Should our clients expect anything less from us? Becoming a skilled consumer of research is one of the best ways of making sure we can offer our clients the most effective treatments.

WE ARE ALL RESEARCHERS

If research is viewed as a means of acquiring knowledge, then we all could be considered researchers. In fact, we begin life as researchers:

“Babies are very good at tracking statistical information in their environment,” says Laura Schulz, a professor of brain and cognitive sciences at M.I.T. “They’re incredibly sensitive to human action and intentional acts in the world. They watch what people are doing to learn causal connections.” Babies will grab the same object over and over, replicating experiences, testing them out, conducting their own experiments. If I smile, will Mommy smile back? (Paul, 2006)

We don’t stop learning as infants, but continue to grow and learn throughout our life.

Practicing therapy is a lot like doing research when viewed from this perspective. We make careful observations of our clients, develop hypotheses, and conduct interventions based on our hypotheses. The results from our interventions (experiments) help us confirm or disconfirm our hypotheses. We take what we have learned from one client and try to discern through repetition whether our knowledge generalizes to

other clients. There are also strong parallels between how qualitative researchers conduct their work and how clinicians do therapy (which we will discuss in Chapter 6). Indeed, the parallels are so strong that participants in qualitative studies can experience therapeutic benefits (Drury, Francis, & Chapman, 2007; McCoyd & Shdaimah, 2007; Murray, 2003; Shamai, 2003)!

Unfortunately, we are prone to making several mistakes in our normal, everyday pursuit of knowledge (Babbie, 2007). What makes “researchers” different from us is that they follow a rigorous set of principles when attempting to acquire knowledge. By following the scientific principles described below, researchers hope to avoid these common mistakes.

The first principle researchers follow is to make careful observations or measurements. For example, researchers may use audio or video recordings of interactions so that they can review and accurately measure what is happening in them. In our everyday life, we generally are not careful observers. We are also vulnerable to selective observation, where we pay attention only to things that are consistent with what we believe. During the course of therapy, one woman ignored her husband’s efforts to change. Instead, she focused only on his shortcomings because she was convinced she had made a mistake in marrying him.

Confirming a cause and effect relationship by carefully ruling out competing explanations for why something happens is a second important scientific principle. Researchers refer to this as **internal validity**, and rely primarily on research designs (e.g., experiments) to establish cause and effect. We are also interested in identifying the underlying causes to events in our lives, but we may not be as careful as researchers in considering alternative explanations. A therapist doing bereavement counseling may be quick to assume that his client’s progress is due to therapy. However, it is possible that the client’s grief improved through a natural mourning process that occurred over time.

A number of factors may make us vulnerable to drawing inaccurate inferences about cause and effect in our daily lives. Sometimes we use rationalizations to protect our ego. For example, rather than admit to his own possible shortcomings, Eric assumed he was passed over for a promotion because his boss favored another employee. We may also fall victim to illogical reasoning. One example is the gambler’s fallacy, where a string of bad or good luck is thought to predict the opposite outcome. We may also attribute supernatural or mystical causes to events that we

do not understand. After her husband's heart attack, Carol could not comprehend why he died so unexpectedly. Carol concluded God must have been punishing her for the sexual abuse she suffered as a child.

The third principle researchers follow is being careful about how far they generalize their conclusions based on the data or information they have collected. Researchers refer to this as **external validity**. External validity is largely determined by how representative our sample is relative to the people or phenomenon to which we want to generalize. In our personal lives, we may be too quick to overgeneralize. We may assume something is true in general when it is true for only a specific set of people or circumstances. Arturo and his wife Hazel came to therapy because of trust issues. Hazel was tired of Arturo's accusations that she was being unfaithful, which she denied. She believed Arturo's lack of trust stemmed from his fear that she was like his two previous wives, who had both cheated on him.

Finally, researchers subject their work to peer review. This helps researchers identify biases, illogical reasoning, or mistaken assumptions in each other's work. In our daily lives, we are not always willing to have others critically examine our thinking. Therefore, our biases, illogical reasoning, or poor assumptions may go unchallenged. In clinical work, seeking consultation with peers or supervisors can be a way of seeking peer review.

If we keep these principles in mind, we will be less likely to make errors in our own everyday pursuit of knowledge both inside and outside the therapy office. As you learn more about research concepts, we will help you see their relevance to the therapy process. Indeed, one of the goals of this book is to sharpen your critical thinking skills as a therapist by showing you how researchers try to gain knowledge.

FALSE DICHOTOMIES AND FALSE BELIEFS

If research is so valuable, then why are therapists so reluctant to learn research? One reason is that many clinicians have misconceptions about research. In this section we will explore and challenge some of these misconceptions.

Many therapists have been socialized to see research and clinical work as separate domains. It is not uncommon for undergraduate psychology students to observe that their faculty fall into two distinct

camps—those that do research and those that do clinical work. This only reinforces the belief that research and clinical practice are independent of each another.

This belief has the unfortunate consequence of erecting a barrier between the two worlds. As a result, some clinicians question how much research can inform clinical work (Dattilio, Piercy, & Davis, 2014; Williams et al., 2006). They may believe, for example, that therapy is more of an art than a science. However, we believe this is a false dichotomy. We do not believe using research means the clinician will simply become a technician who lifelessly applies manualized treatments to clients. Rather, we see practicing therapy as both an art and a science, and that science can inform the art of therapy. Being a master musician requires both technical skill and artistic ability. In a similar manner, we believe therapists can use research knowledge in combination with their clinical experience to maximize their effectiveness.

Many also assume researchers and clinicians think in different ways. However, there is considerable overlap between the critical thinking skills used by researchers and therapists. Researchers and clinicians may use different language to describe these skills, but they are similar if you look beneath the labels. For example, researchers use the term *internal validity* to describe accurately attributing cause and effect to a phenomenon. This is really no different from what therapists do during assessment when they try to identify the underlying causes to their clients' problems.

Another false belief regarding research is that it is a highly mathematical discipline. Many clinicians equate research with statistics. While it is true that many studies use statistics to analyze the results, research actually relies more on logic than math for its rigor. A cornerstone of research is establishing cause and effect through internal validity, which is determined through research design rather than mathematics. Although an advanced understanding of research requires some mathematical knowledge, learning the fundamentals of research requires more of a conceptual than mathematical understanding.

Because many students equate research with statistics, many fear they will not have the necessary math skills to be successful in research. Their distaste for math does not improve their motivation to learn research. We want to assure you that we will discuss research and statistics from primarily a conceptual or logical standpoint, with very little reliance on mathematics.

PURPOSE AND PHILOSOPHY OF THIS BOOK

We anticipate that this book will be unlike other research methods texts you have read. The most obvious difference is that the book combines a discussion of both research methods and evidence-based practice. We believe combining these two elements will provide you with the best blueprint for applying research to your clinical work.

The first half of the book is devoted to teaching the fundamentals of research. In teaching research to our students, we often found that they came into our program with different levels of expertise or exposure to research. Our book will provide you with the essentials you need to effectively evaluate and apply research. Chapters 2–7 examine various research designs (e.g., experiments, surveys, qualitative research) that you will frequently encounter, while Chapter 8 examines values and ethical considerations in research. Chapters 9–11 provide a user-friendly introduction into descriptive and inferential statistics.

You will notice that the chapters in the first half of the book follow a set structure. Each chapter begins with a brief introduction and overview of the key concepts in the chapter. For those who have a strong background in research, the overview may be a sufficient refresher before exploring the application section. For those who are less familiar with the topic, the overview can orient you to the major ideas you will be learning. The overview is followed by the “Basics” section, which goes into more depth in discussing the key chapter concepts. This section is not intended to give you enough technical details to do research or statistical analyses, but it will provide you the necessary knowledge you need to understand research studies when you read them. The chapter concludes with an “Application” section. In this section, you will learn how to evaluate a study based on the chapter’s concepts. It also explores how the concepts can be applied to your clinical work.

The second half of the book focuses on evidence-based practice (EBP), which will explore in detail a process for integrating research into your therapy. The first EBP chapter (12) will provide an overview of EBP and introduce you to the five A’s (Ask, Acquire, Appraise, Apply, and Analyze and adjust). Subsequent chapters (13–18) will explore the A’s in more detail. The book concludes with a chapter (19) on contextual factors that influence EBP, and how these factors may impact EBP in the future as it continues to evolve.

Our goal throughout the book is to present the concepts in a simple

and straightforward manner. We are attempting to make the ideas as accessible as possible. You will notice, for example, that we often use metaphors and examples from everyday life to help you connect with the ideas. We also use numerous vignettes throughout the book to illustrate how research principles can be applied clinically. The use of vignettes is consistent with our philosophy that this is as much a clinical book as it is a research book. You will discover that many of the concepts and critical thinking skills that researchers use can be beneficial to clinicians. As you read the book, you may come to appreciate that the divide between research and clinical practice is not as great as you once thought.

At the end of the book you will find appendices we believe will be valuable references to you. The first appendix summarizes the key ideas from the EBP portion of the book, in essence a “pocket guide” for EBP. The second appendix lists questions you may want to consider when evaluating research. The last appendix contains further resources on EBP you may want to explore. Key terms or concepts in the book that are highlighted in bold are found in the glossary, along with brief definitions.

ASSUMPTIONS

Several assumptions inform how we have written the book. First, we believe applying research to clinical work presents many complexities and challenges, which we will discuss throughout the book. We attempt to provide practical guidance on how to navigate these challenges. In spite of these challenges, we believe the effort invested in applying research to clinical work is worth it.

In addition, we recognize that most therapists have limited time and resources (Sandberg, Johnson, Robila, & Miller, 2002). As a busy clinician, you may find it difficult to set aside time to implement EBP. We try to show respect for your time by offering clear and concise guidelines for applying research. We also offer possible strategies that you can use to be most efficient in accessing and applying research.

We also recognize that not all research is of high quality. When using research, we believe in the old adage “Buyer beware!” Research is like the Internet in many ways. The Internet has made valuable knowledge more easily available to individuals. Through information on the Internet, one of us was able to diagnose why his dishwasher was not properly working. Furthermore, he was able to repair it with the guidance of a YouTube video. Yet, we also know that we have to be careful of the

information on the Internet because it may be inaccurate or misleading. Research literature is much the same. Therefore, we will equip you with the knowledge and skills you need to critically evaluate research.

There is also debate in the field about what kind of research can be used in EBP. Some believe only findings from randomized experiments or clinical trials should be used in EBP. We agree that this type of research is the gold standard when evaluating treatments. However, we also believe this is a rather narrow definition of how research can inform clinical work (Dattilio et al., 2014). Other types of research can offer helpful insights regarding assessment, family dynamics, factors associated with mental illness, and the therapy process (just to name a few examples). Therefore, our position is that a variety of quantitative and qualitative research designs can provide valuable information depending upon the questions we are asking.

Earlier we noted that research is one of many potential sources of knowledge that can inform our clinical knowledge. Research should not necessarily replace these other sources of knowledge. Rather, we believe research findings can and should be integrated with other sources of information (e.g., clinical experience, intuition, knowledge of the client) to guide our clinical decision making.

Finally, you may notice that we make frequent reference throughout the book to EBP in the medical field. The primary reason is that the medical field is on the forefront of integrating EBP into clinical care. The medical field is often more advanced in developing EBP tools and guides than the mental health field. Therefore, we believe mental health professionals can benefit from being familiar with these tools. Furthermore, medical databases may have valuable research for mental health professionals, particularly in treating psychiatric illnesses. Yet, we also recognize that there are important differences between the medical and mental health professions that must be acknowledged. For example, the medical literature is more likely to focus on medications rather than psychotherapy for treating psychiatric illness. We have attempted to take the best in EBP practice in medicine while remaining true to what is unique to psychotherapy.

CONCLUSION

Learning research is a lot like having a cross-cultural experience as a traveler. When we visit a foreign land, initially the customs and lan-

guage may seem strange and difficult to understand. Chapters 2–11 will introduce you to the customs and practices of research. Although the language and terms may seem foreign at first, we will help translate them so you can comprehend them. Once you get through the language barrier, you will discover many commonalities between how researchers and clinicians relate to the world.

Traveling to another culture can be an enriching experience. You can come away with a better understanding of your own culture by comparing it to the new culture you visited. It is our hope that you will have a similar experience as you learn more about research. Chapters 12–19 on EBP will help you build a bridge between research and your clinical world. So, let us begin the journey.

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