

## INTRODUCTION

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Counselors help people with a wide variety of personal, educational and other problems. We as professionals assume responsibility for not only promoting the welfare of the people who seek our services, but also protecting clients from harm. For many years people have gone to counselors because they have problems they are unable to solve. As professionals we need to continually update and extend our knowledge about human nature and the field of counseling as well as evaluate our services, especially because the applied nature of our work affects the daily existence of thousands of people. How do we know our interventions are effective? This question has led to identifying what were referred to initially as empirically validated treatments [Stich, Benson, & Ahn, 1997] and more recently as evidence-based practice [Chwalisz, 2003]. In addition, this has led to the “great psychotherapy debate”, regarding which therapy models and methods are most effective. What kind of *knowledge* must a profession be based on to succeed? The answers to these questions rest on the manner in which the profession has developed its knowledge base.

In this book we take a close look at science as it relates to counseling. We first discuss different ways of knowing, and particularly the scientific way of knowing. Then we discuss philosophical foundations of human behavior and introduce you to some of the issues under debate in the philosophy of science. Finally, we discuss some issues pertaining to a philosophy of science for the counseling profession. These philosophical issues are complex and intricate; our purpose is to introduce you to the basic issues, and thus we provide only a brief overview. Nonetheless, these issues form the foundation for future research and training in the profession. Charles Peirce, a nineteenth-century American mathematician, philosopher, and logician, stated that

there are at least four ways of knowing, or of “fixing belief” [Buchler, 1955]. The first method is the method of tenacity – that whatever belief one firmly adheres to is truth. These “truths” are known to be true because we have always known them to be true. Second method of knowing is the method of authority. If noted authorities such as the president of the United States, a state governor, a well-known psychologist, or a clinical supervisor say it is so, then it is the truth. A third method of knowing is the a priori method, or method of intuition [e.g., Cohen & Nagel, 1934]. This method is based on the notion that what agrees with reason, what makes sense, is true. We would add a fourth method of knowing – the scientific method, which involves empirical tests to establish verifiable facts.

A profession that aims to facilitate growth and positive change in clients must be based as much as possible on knowledge that exists in a reality outside of professionals’ personal beliefs and biases. The scientific method has been developed to create such knowledge. Basically, the scientific method is a set of assumptions and rules about collecting and evaluating data. The explicitly stated assumptions and rules enable a standard, systematic method of investigation that is designed to reduce bias as much as possible. Central to the scientific method is the collection of data that allows investigators to put their ideas to an empirical test, outside of or apart from their personal biases. In essence, the proof of the science is in the data.

There are obvious costs to acquiring knowledge by using the scientific method. Conducting empirical investigations is costly in terms of time, energy, and resources. Putting complex and internal cognitive and affective processes to empirical test is a difficult and elusive task. Sometimes when we try to identify specific processes or variables we become mechanistic and lose the gestalt. Sometimes the lack of sophistication of our research methods results in conclusions that tell us little about real-life processes.

But the risks of building a profession on nonscientific evidence are far greater. The thalidomide babies are one clear example of the

risks associated with not empirically testing one's opinions. Conducting therapy based only on personal hunches and opinions is risky and might well result in harming clients [e.g., Lambert, Bergin, & Collins, 1977]. It is important that the knowledge on which the profession is built be based on objective or verifiable information that can be put to empirical or quantifiable tests. In this way, the methods used to establish our "truths" have a built-in self-correction process; each empirical test is independent of previous findings and can either verify or disconfirm the previous knowledge. In contrast, subjective ways of knowing that do not involve empirical tests run the risk of creating myths. These myths can result in ineffective or even harmful counseling, and hinder the progress of a profession.

This does not mean that the professionals' beliefs, hunches, and even biases are not useful in exploring ideas and perhaps extending the field's knowledge. We can undoubtedly learn a great deal about human behavior from the more subjective ways of knowing; it is clear that many ideas and breakthroughs regarding therapeutic orientations and techniques have initially sprung from practitioners' direct experience with people. However, it is important to note that these ideas must be empirically tested. In fact, no major orientation has been maintained in the profession without substantial empirical support. Parenthetically, even though the scientific method tends to provide data that are prone to less bias or distortion, Howard [1982] cogently recommended that we "periodically obtain evidence demonstrating the adequacy" of the various assumptions or procedures involved in the scientific method [p. 324].

Thus, the knowledge of a profession must be empirically based and verifiable rather than subjective and untestable. Even though the scientific method has costs and is not problem-free, building a helping profession without it is too risky. Without a strong scientific foundation, the credibility of a profession is significantly challenged.