Report 7

Encouraging Students to Think Critically About Psychotherapy: Overcoming Naïve Realism

Scott O. Lilienfeld, Jeffrey M. Lohr, and Bunmi O. Olatunji

Many students choose to enter the field of psychology because they want to help others. Yet few appreciate the formidable difficulties of determining whether mental health professionals' helping efforts are effective. In particular, many novice psychology students do not recognize the obstacles standing in the way of ascertaining whether a treatment outperforms doing nothing, or of whether a treatment's positive effects exceed those of a myriad of "nonspecific effects" (e.g., placebo effects; see below) shared by many or most therapies (see, e.g., Chambless & Ollendick, 2001, for a review of the movement to develop criteria for, and lists of, empirically supported therapies).

Moreover, many students embark on their coursework holding two key misconceptions about psychotherapy. These misconceptions, we contend, must be addressed before students can learn to think critically about psychological treatment.

Psychotherapy: Two Key Misconceptions

First, many students assume that all of the more than 500 different "brands" of psychotherapy (Eisner, 2000) are effective or at worst harmless. Many believe that "doing something is always better than doing nothing." Yet a growing body of research refutes this assumption (Lilienfeld, 2007; Lilienfeld, Lynn, & Lohr, 2003). For example, research shows that *crisis debriefing*, a treatment that attempts to ward off posttraumatic stress disorder (PTSD) among trauma-exposed victims by urging them to "process" the emotions associated with this trauma, may actually increase individuals' risk of PTSD (McNally, Bryant, & Ehlers, 2002). As a second example, research demonstrates that *facilitated communication*, which purports to enable mute autistic individuals to communicate with the aid of an assistant who guides their hands over a keyboard, is entirely ineffective.

Teaching Critical Thinking in Psychology: A Handbook of Best Practices Edited by D. S. Dunn, J. S. Halonen, and R. A. Smith
 ISBN: 978-1-405-17402-2

Its seeming effectiveness is due to facilitators' inadvertent control over autistic individuals' hand movements (Jacobson, Mulick, & Schwartz, 1995; Wegner, Fuller, & Sparrow, 2003).

Second, novice students often assume that research designs are not necessary to assess the effectiveness of psychotherapy. To many of them, the fact that "psychotherapy works" seems self-evident. After all, if clients can tell us whether they have improved and therapists can observe clients' improvement across sessions, why the need for complicated research designs?

Naïve Realism

We can answer the question posed above with two words: *naïve realism*. Naïve realism is the erroneous belief that the world is exactly as we see it (Ross & Ward, 1996). The concept of naïve realism is deeply embedded in popular consciousness, as suggested by the ubiquity of such sayings as "seeing is believing" and "what you see is what you get." Most beginning psychology students are naïve realists; they do not realize that (a) their assumptions, expectations, and biases influence their perceptions of the world; and (b) crucial unmeasured variables may account for these perceptions. Segall, Campbell, and Herskovits (1966) referred to this tendency as *phenomenal absolutism* and observed that "The normal observer naively assumes that the world is exactly as he sees it. He accepts the evidence of perception uncritically" (p. 5).

We propose that *naïve realism* is a major, if not *the* major obstacle, to educating students to think critically about psychotherapy. Naïve realism can lead students and therapy trainees to assume incorrectly that they can rely on the raw data of their sensory impressions to gauge therapeutic change. As a result, they can be swayed by their subjective clinical appraisals ("I can see the improvement with my own eyes") and fail to appreciate that apparent client change can be due to a plethora of hidden and often nonintuitive variables. In some cases, they may accurately perceive change, but misunderstand it; in other cases, they may perceive change when it is not present.

Students and trainees may be especially prone to this error when they expect to see change, as is frequently the case following psychotherapy. In such cases, their *confirmation bias*—that this, the tendency to focus on evidence that supports one's hypotheses while ignoring, minimizing, or distorting evidence that does not (Nickerson, 1998)—probably contributes to their perception of change in its absence. Specifically, students' and trainees' propensity to attend to and recall instances of change while discounting and forgetting instances of nonchange can lead them to overestimate the effectiveness of psychotherapy.

Ten Reasons Why Ineffective Psychotherapies Often Seem to Work

Students and trainees often do not appreciate the need for research safeguards against naïve realism, especially randomized controlled designs (RCTs). To become critical

consumers of the psychotherapy outcome literature and scientifically informed therapists, students need to understand that RCTs and other research designs help protect against the many rival explanations for apparent change in psychotherapy. Here we outline 10 reasons why naïve realism can fool therapists—and psychotherapy clients—into perceiving therapeutic improvement even when it has not occurred (see also Arkowitz & Lilienfeld, 2006; Beyerstein, 1997). In our view, exposure to these reasons should be de rigueur when teaching undergraduates and graduate students about psychotherapy.

1. *Initial misdiagnosis*. A therapist may misdiagnose a client with an episodic condition, such as bipolar disorder, as having a chronic condition, such as schizophrenia. As a consequence, the therapist may misinterpret naturally occurring change in the client's condition as reflecting treatment effectiveness.
2. *Spontaneous remission*. Many individuals in acute psychological distress improve of their own accord, in part because of their coping mechanisms and in part because they encounter positive life events outside of therapy. As psychoanalyst Karen Horney (1957) observed, "life itself still remains a very effective therapist" (p. 240).
3. *Regression to the mean*. Extreme scores tend to be become less extreme on retesting. This phenomenon is a particular problem when inferring change in psychotherapy because most clients seek therapy when they are at their worst.
4. *Multiple treatment interference*. Many clients in psychotherapy receive other treatments (both psychological and psychopharmacological) at the same time, making it difficult to pinpoint the genuine causes of change (Kendall, Butcher, & Holmbeck, 1999).
5. *Selective attrition*. Clients who drop out of therapy are typically more impaired than those who remain in therapy, resulting in too rosy a picture of treatment effectiveness.
6. *Placebo effects*. Many clients may improve not because of active ingredients in the psychotherapy *per se*, but because they expect to improve. Indeed, research suggests that 40 to 60% of therapy clients report marked improvement between the initial phone call and the first therapy session (Howard, Kopta, Krause, & Orlinsky, 1986), perhaps in part because their moods are buoyed by the anticipation of imminent improvement.
7. *Novelty effects*. People often display an initial positive response to any new intervention that offers the promise of change, although this response tends to wear off rapidly (Shadish, Cook, & Campbell, 2002).
8. *Demand characteristics*. Clients often tell therapists what they think their therapists want to hear, namely that they are getting better.
9. *Effort justification*. Clients may feel a need to justify the energy, expense, and effort of therapy, resulting in reported improvement (Axsom & Cooper, 1985).
10. *Retrospective "rewriting" of one's initial level of functioning*. Research shows that following certain self-improvement programs, such as study skill courses, people do not change on objective measures. Yet they sometimes falsely believe they have improved because they misremember their initial level of functioning as worse than it actually was (Conway & Ross, 1984).

Educational and Assessment Implications

Before introducing students to these 10 reasons, it can be helpful to expose them to optical illusions (e.g., the Muller–Lyer illusion, the Ponzo or railroad tracks illusion) to persuade them that their raw sensory impressions can be deceiving (Hoefler, 1994). Such illusions may help to disabuse them of naïve realism. It may also be helpful to provide them with examples of how naïve realism has led to incorrect beliefs about the natural world, such as the subjectively compelling belief that the world is flat or that the sun revolves around the earth. In both cases, people's raw observations misled them about reality.

Moreover, it may be useful to teach students about the long history of failed treatments in medicine, including psychiatry. Most historians of medicine have argued that prior to 1890, most of the treatments (e.g., bleeding, blistering) that doctors prescribed to patients were either ineffective or harmful (Grove & Meehl, 1996), even though most doctors were persuaded otherwise. Similarly, most early reports of the "effectiveness" of prefrontal lobotomies were based on surgeons' informal observations of improvement. One early proponent of lobotomy wrote that "I am a sensitive observer and my conclusion is that a vast majority of my patients get better as opposed to worse after my treatment" (quoted in Dawes, 1994, p. 48).

To assess whether efforts to teach students about the perils of naïve realism are effective, one can present them with case examples of apparent improvement among clients in psychotherapy, ask them to generate rival explanations for the reported change, and encourage them to develop research strategies that would produce more defensible evidence of treatment effectiveness. If students can accurately identify these explanations and propose ways of controlling for them (e.g., placebo-controlled designs), they are well on their way toward shedding their naïve realism.

References

Arkowitz, H., & Lilienfeld, S. O. (2006, April/May). Psychotherapy on trial. *Scientific American Mind*, *2*, 42–49.

Axsom, D., & Cooper, J. (1985). Cognitive dissonance and psychotherapy: The role of effort justification in inducing weight loss. *Journal of Experimental Social Psychology*, *21*, 149–160.

Beyerstein, B. L. (1997). Why bogus therapies seem to work. *Skeptical Inquirer*, *29*, 29–34.

Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: Controversies and evidence. *Annual Review of Psychology*, *52*, 685–716.

Conway, M., & Ross, M. (1984). Getting what you want by revising what you had. *Journal of Personality and Social Psychology*, *47*, 738–748.

Dawes, R. M. (1994). *House of cards: Psychology and psychotherapy built on myth*. New York: Free Press.

Eisner, D. A. (2000). *The death of psychotherapy: From Freud to alien abductions*. Westport, CT: Praeger.

Grove, W. M., & Meehl, P. E. (1996). Comparative efficiency of informal (subjective, impressionistic) and formal (mechanical, algorithmic) prediction procedures: The clinical statistical controversy. *Psychology: Public Policy and Law*, *2*, 293–323.

Hoefler, J. M. (1994). Critical thinking and the use of optical illusions. *PS*: *Political Science and Politics*, *2*, 538–545.

Horney, K. (1957). *Our inner conflicts*: *A constructive theory of neurosis*. London: Routledge & Kegan Paul.

Howard, K. I., Kopta, S. M., Krause, M. S., & Orlinsky, D. E. (1986). The dose–effect relationship in psychotherapy. *American Psychologist*, *41*, 159–164.

Jacobson, J. W., Mulick, J. A., & Schwartz, A. A. (1995). A history of facilitated communication: Science, pseudoscience, and antiscience. *American Psychologist*, *50*, 750–765.

Kendall, P. C., Butcher, J. N., & Holmbeck, G. N. (Eds.). (1999). *Handbook of research methods in clinical psychology* (2nd ed.) New York: Wiley.

Lilienfeld, S. O. (2007). Psychological treatments that cause harm. *Perspectives in Psychological Science, 2*, 53–70.

Lilienfeld, S. O., Lynn, S. J., & Lohr, J. M. (2003). *Science and pseudoscience in clinical psychology*. New York: Guilford.

McNally, R. J., Bryant, R. A., & Ehlers A. (2003). Does early psychological intervention promote recovery from posttraumatic stress? *Psychological Science in the Public Interest*, *4*, 45–79.

Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology, 2*, 175–220.

Ross, L., & Ward, A. (1996). Naïve realism: Implications for social conflict and misunderstanding. In T. Brown, E. Reed, & E. Turiel (Eds.),*Values and knowledge* (pp. 103–135). Hillsdale, NJ: Lawrence Erlbaum Associates.

Segall, M. H., Campbell, D. T., & Herskovits, M. J. (1966). *The influence of culture on visual perception*. Indianapolis, IA: Bobbs-Merrill.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton-Mifflin.

Wegner, D. M., Fuller, V. A., & Sparrow, B. (2003). Clever hands: Uncontrolled intelligence in facilitated communication. *Journal of Personality and Social Psychology, 85,* 5–19.

Author Note

Please address all correspondence to Scott O. Lilienfeld, Ph.D., Professor, Department of Psychology, Room 206, Emory University, 532 Kilgo Circle, Atlanta, Georgia, 30322; email: slilien@emory.edu; fax: 404-727-0372; office phone: 404-727-1125.