

# What's a Therapist to Do When Clients Have Pseudoscientific Beliefs?

Stuart Vyse, *Stonington, Connecticut*

MENTAL HEALTH PRACTITIONERS have long struggled to assert their authority on matters psychological. Even now that mental health services have become more widely available than they once were, practitioners suffer by comparison to the medical profession. Seeking psychological services is often stigmatized in a way that medical treatment is not (Sartorius, 2007; Schulze, 2007). In addition, physicians gain an air of authority from their highly technical subject matter. In contrast, everyone witnesses human behavior every day. What could be so difficult about knowing why people act the way they do?

Indeed, the problem is much larger than just mental health professions. Today, the denial of authority extends to almost anyone claiming to be an expert. Scientists—who should be afforded some credit in return for their extensive training and the quality of their data—are often at odds with the views of the general public. A recent Pew Research Center poll found an astonishing 51-point gap between the views of U.S. adults and members of the American Association for the Advancement of Science (AAAS) on the safety of genetically modified foods (GMOs; Funk & Rainie, 2015). Eighty-nine percent of AAAS members said GMOs were safe. (They can't all work for Monsanto!) Similarly, the Pew study found that 87% of scientists agreed with the statement, "Climate change is mostly due to human activity," compared with only 50% of U.S. adults.

A recent book decries the "death of expertise" (Nichols, 2017b), and there is no shortage of anecdotal evidence to certify the death. The United States recently elected a real estate developer with no prior government experience to be president, and he went on to appoint a number of people to high-level positions who were similarly lacking in expertise relevant to their assignments. As just one example, the new administration appointed a former conservative radio talk-show host to the highest science position in the Department of Agriculture—a man whose only science degree was a B.A. in political science (Geiling, 2017; Nichols, 2017a). The new president came into power by campaigning

against the "elites," repeatedly asserting, "I alone can fix it" (Jackson, 2016).

So how should we respond to these challenges? Michael Bowen (2017), writing for the World Economic Forum's Young Scientists Community, asserts that we are confronted with "a populist backlash against scientific consensus and expert opinion" and urges scientists to strengthen their resolve and fight back with facts. But it seems like scientists have been fighting back with facts and evidence for a while now, with minimal results. It has been 19 years since Andrew Wakefield published his infamous study in *The Lancet*, purporting to show a relationship between the MMR vaccine and the incidence of autism. Many failures to replicate Wakefield's results followed, and 7 years ago, the British General Medical Council revoked Wakefield's medical license and *The Lancet* withdrew his 1998 article (Offit, 2010). Much ink has been spilled and words spoken in an effort to use facts to convince parents that vaccination is safe and important, but a 2015 poll found that only 84% of Americans thought vaccination of young children was very or extremely important, down from 93% fourteen years earlier (Newport, 2015). In 2014 the Centers for Disease Control reported a record 663 cases of measles, the "greatest number of cases since measles elimination was documented in the U.S. in 2000" (Centers for Disease Control, 2017).

Lest hubris begin to set in, it should be acknowledged that therapists are far from immune to nonscientific practices. Recent evidence shows that many practicing psychologists and social workers are using techniques that are unsupported by scientific evidence (Barnett & Shale, 2012; Pignotti & Thyer, 2009; Stapleton et al., 2015). As a result, considerable effort needs to be aimed at healing ourselves (Lilienfeld et al., 2013). But putting that issue aside, let's assume you are a behavior therapist committed to evidence-based practice (EBP) who is confronted with a client who is equally committed to Reiki, chelation therapy, or homeopathic medicines. What is a therapist to do?

In the long term, the solution to these conflicts may come from better public edu-

cation in science and critical thinking. In addition, Lilienfeld, Lynn, and Lohr (2014) offered a number of suggestions for reforming the standards and training of clinical psychologists. But these societal and professional reforms will not come in time for therapists who have credulous clients in their offices today. Understanding this, I will discuss four possible strategies for dealing with unscientific client beliefs: adopting, avoiding, reasoning, and collaborating.

## Adopting

Although it may seem odd to consider adopting the unscientific ideas of your clients, it is not without precedent. Confronted with a client who has a particular worldview, therapists have been known to incorporate client beliefs into the treatment plan. Sweat lodge ceremonies have been recommended as part of treatment for posttraumatic stress disorder in Native Americans, and other practitioners have suggested praying with or for clients during therapy (Meichenbaum, n.d.; Silver & Wilson, 1988). Therapists who adopt these methods may have the admirable goals of acknowledging cultural or religious differences or wanting to make clients feel more at home, but the ABCT is an organization committed to EBPs (ABCT, 2017). Without convincing empirical support, these practices represent an ethical dilemma for the therapist. Furthermore, if therapists hope to project a consistently evidence-based image to the public, adopting nonscientific methods will only muddy the waters and make it harder to distinguish the profession from other non-evidence-based practitioners. Finally, in the case of sweat lodge ceremonies and a number of other nontraditional methods, there may be substantial safety concerns (Dougherty, 2009). As a result, adopting nonscientific client beliefs as part of therapy is not a recommended strategy.

## Avoiding

From a utilitarian viewpoint it might be reasonable to say nothing. As long as the client is faithfully following through with your treatment recommendations and making progress, a pragmatic strategy might be to avoid confronting the client's misconceptions and say as little as possible about the pseudoscientific methods being used or advocated by the client. When therapists are directly asked about non-EBP treatments, they are under an ethical obligation to provide accurate information,

but given that the primary goal is improving client well-being, saying nothing may sometimes be an option.

However, biting one's tongue will rarely be a comfortable choice because the therapist risks appearing to give credence to an unsupported treatment, and just as in the case of the "adopting" strategy, it is important to present the profession as consistently guided by evidence. But, in the interest of keeping positive momentum going, individual therapists may choose to avoid unnecessary battles. Unfortunately, sometimes the client's unsupported remedies obstruct the implementation of evidence-based interventions and/or are potentially harmful. In these cases, avoidance is not an option.

### Reasoning

In addition to a rejection of experts, the current era has seen a decline in the value of rational argument. Indeed, sophistry appears to be enjoying a period of growth. During the 2016 U.S. presidential campaign the eventual winner was greatly rewarded for his use of derogatory nicknames for his political rivals, a practice that has continued during his presidency (Estepa, 2017), and formerly trusted news sources are now routinely labeled "fake news."

As difficult as the current environment appears to be, a discussion with clients about basic research methods and levels of evidence—or lack of evidence—supporting various methods is worth trying. It would be impractical to administer a full course in critical thinking; however, some therapists have had success giving clients reading material about both EBPs and non-EBPs (Kay, 2015). But what if those early conversations don't go smoothly? What's a therapist to do?

If there is a benefit of the current climate of rampant credulity it is the emergence of a growing literature on the best methods for debunking misinformation. In 2012, Lewandowsky and colleagues published a very useful qualitative review, and recently Chan, Jones, Jamieson, and Albaracin (2017) published a meta-analysis of the effectiveness of various debunking methods. These studies point to a number of recommendations about how to successfully counter misinformation, and several of these may be useful to the clinician who hopes to steer a client towards EBPs:

- Avoid reviewing any evidence in support of unsupported treatments. In the

interest of fairness, a therapist might admit that homeopathic medicines have an intuitive appeal and that many effective medicines were similarly derived from naturally occurring herbs and compounds, but this would be a mistake. The research on debunking suggests that any recounting of arguments in support of misinformation tends to solidify a mental model, making it more difficult to quash with new information.

- Don't just say the misinformation is wrong; provide an alternative formulation. The debunking of misinformation leaves a void that is an obstacle to a lasting effect. As time passes, the client is likely to refill the hole with the same old myth. As a result, it is important to supply the client with information about EBPs that is explained in some detail, along with the available evidence to back it up. As a result, when debunking homeopathy, the therapist should point out that the active ingredients are far too diluted to be effective, but it is also important to create a new theory of the client's problem through the lens of a sound empirical research. Be prepared to report what science has to say about the client's concern.

- Try to keep the explanation of EBPs simple and clear. Somewhat paradoxically, as important as it is to create a new evidence-based theory of the problem, debunking research suggests that an overly elaborate explanation can backfire. If the misinformation is simpler and clearer than the more valid alternative, the myth may survive. Unfortunately, it can be difficult to keep the description of an EBP simple. For example, when a therapist is confronted with a parent who is committed to the use of facilitated communication in the treatment of a child with autism, the elaborateness of an applied behavior analysis (ABA) protocol is going to come up short in relation to the far simpler explanation, "Jenny has a motor problem. She needs help steadying her hand on the keyboard."

- If there is a choice between giving information in printed or video form, choose video. A recent study showed that when fact-checking information was presented in either long-form written format or in a video, the video presentation was more effective in debunking misinformation (Young, Jamieson, Poulsen, & Goldring, 2017). Given the number of professional videos that are available both commer-

cially and on free websites (e.g., YouTube.com), it is likely that therapists can find useful material to present to clients.

### Collaborating

If the rational approach does not quickly move the client in a constructive direction, a more empirical strategy can sometimes work. The therapist and client have an important common goal, helping the client. If sharing accurate information does not shake the client from unsupported or pseudoscientific beliefs, then offering to collaborate on an empirical test can be helpful. Rather than continuing to argue with the client—or sending the client away—the therapist can offer to join forces in an evaluation of the treatment options. In brief, the therapist might simply say, "OK, I can see you're not convinced. Let's perform a test with the understanding that whatever method works best will be the one we choose."

This strategy has been successfully employed by Shannon Kay (2015), a talented behavior analyst who has worked with many parents of children with autism.<sup>1</sup> Autism continues to be a "fad magnet" (Metz, Mulick, & Butter, 2015), attracting a seemingly endless stream of pseudoscientific treatments. As a result, Kay reported that, by the time she arrived on the scene of a newly diagnosed case, the child's parents were often already using prism glasses or sensory integration therapy. In those cases where she was unable to win parents over by sharing information and readings, she offered to conduct a single-participant study testing an applied ABA approach against the methods being used by the parents. And, of course, the subject of the research was the most important person of all, the child everyone was trying to help.

Kay described her experiences and provided data from three case studies in a chapter for the book *Controversial Therapies for Autism and Intellectual Disabilities* (Foxy & Mulick, 2015). In each of the three cases, she used an alternating treatments design and trained the parents in data collection. In all three instances, the unsupported therapy being used at the time was shown to have a negative effect on the child's behavior, rather than a positive one, and the parents and educational team

<sup>1</sup>Shannon Kay is a former student of mine.

members quickly reversed their positions and endorsed a plan based on ABA.

When working with adults on issues other than autism treatment, it may be impractical to implement a test of competing therapies, and when a test is possible, a reversal design (e.g., ABAC) may be more appropriate than the alternating treatment design employed by Kay (2015). But introducing the client to some of the basics of research design and objective data collection can be very useful. Furthermore, it appears that one of the important features of Kay's approach is putting aside the struggle to assert one's authority as a therapist and offering to solve the dispute in a collaborative fashion. Understandably, some therapists may find it objectionable to agree to test a previously unsupported therapy. Furthermore, the empirical test approach is not without risks. Clients can rarely be blinded to the experimental conditions, and client expectations about pseudoscientific therapies can lead to measurable placebo effects. In the unlikely event of a positive outcome for a non-EBP, the therapist would be confronted with a thorny dilemma. It is best not to gamble if the outcome is in doubt. But in those cases where a collaboratively designed test seems both feasible and potentially effective, it may be more convincing than talk.

It is difficult to be optimistic about the prospect of a near future free of superstition and pseudoscience. In recent decades we have experienced an explosion in access to information; however, much of the easiest information to find is false. The Pew studies cited above suggest that many people are unable to judge the quality of information and, as a result, are unprepared to separate out the misinformation. Furthermore, as the Dunning-Kruger effect suggests, it is often the least informed people who are the most convinced they are right (Kruger & Dunning, 1999). As a result, further research on debunking strategies will be needed, and for the foreseeable future, therapists will continue to come across clients who espouse unscientific therapies.

A final thought. Fad therapies appear to reproduce at alarming rates and, in some cases, are all but impervious to rational attack. Despite the recent blows to the authority of experts of all kinds, behavior therapists are in an excellent position to speak publicly on these topics. It is unlikely that pseudoscience and superstition will ever be permanently vanquished, but behavior therapists who seek out public speaking opportunities, comment in the

media, or write for the general public can help to counter the misinformation in their communities. Although many professionals feel most comfortable speaking about the EBPs they have been trained to use, reducing the level of psychological snake oil in the marketplace will take additional efforts. According to research cited above, effective debunking will require therapists to inform people about the current scientific understanding of the disorders they treat and to call out the unsubstantiated treatments that are sometimes used. Taking these extra steps may eventually reduce the number of clients who come to you under the influence of pseudoscientific theories and will have the added benefit of publicly reinforcing the point that, in contrast to other approaches, behavior therapy is a rigorous evidence-based discipline.

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**Correspondence** should be addressed to the author at [vyse.stuart@gmail.com](mailto:vyse.stuart@gmail.com)

## The Seductive Allure of Pseudoscience in Clinical Practice

Dean McKay, *Fordham University*

RECENTLY, A MAJOR PROFESSIONAL organization sponsored a webinar whereby the attendees would learn about the underlying mechanisms and procedures for Emotional Freedom Techniques (EFT; see Moran & Keynes, 2012, for overview). What was notable about this webinar offering was not so much the topic as the fact that the sponsoring organization indicates a commitment to promoting scientific foundations of assessment and treatment. One might even make a case for the scientific basis of EFT, given that there are claims in the literature of efficacious outcome with the method (Clond, 2016). However, most readers of this journal know what's coming next: namely, that EFT, as a member of the broader class of energy therapies, lacks (a) an underlying theoretical basis for different psychopathological states and (b) an empirical basis for the mechanisms of treatment efficacy. And yet, offerings like the aforementioned webinar proliferate, available through a wide range of organizations that are otherwise solidly science-minded.

Energy therapies are hardly the only example of treatment methods that lack any scientifically compelling underlying mechanisms of psychopathology or explanatory structures for the intervention methods. Indeed, there are far too many to enumerate here. Those who practice approaches that the scientific community have declared science-based smugly<sup>1</sup> denigrate these other approaches as nonscientific or, worse, pseudoscientific. Despite this divide, these approaches proliferate, and many practitioners offer treatments that lack qualities that we might call scientific.

Further, mental health practitioners are not the only professional group to fall prey to pseudoscientific theories. One famous example is the pursuit of achieving cold fusion in the lab, with the most recent unsubstantiated claim coming in 1989, despite the lack of a compelling theoretical basis for predicting the phenomenon could be produced (Beaudette, 2002). Philoso-

phers of science have struggled with the problem of pseudoscience, citing a demarcation problem suggesting a continuum of sorts from that which can be definitively termed science to that which is squarely pseudoscience (Popper, 1957).

While all sciences seem to be susceptible to pseudoscience, psychotherapy approaches may be at particular risk. The aim of this paper is to suggest some explanations for this problem, and some modest recommendations for remediation.

### Therapy Allegiance: A Special Problem in Mental Health Delivery

Since you are reading this article, you are most likely an adherent to the theories that underlie cognitive and behavioral therapies. Asked to describe the approach to a friend or colleague in another profession, you might offer a detailed litany of justifications for the approaches based on your intimate knowledge of the theory and its accumulated empirical support. If asked on follow-up why this approach to treatment is so special and different from traditional psychotherapy, you might go so far as to explicate paradigmatic differences around the degree that each therapeutic approach values data (discussed by a psychodynamic theorist; Bornstein, 2005). But what happens should this same person ask what made you choose this therapeutic approach over all the others that are out there? You might very well offer an explanation that sounds like cold hard rationality—the data made you do it! The approach is evidence-based, and I'm an evidence-based person! But the research suggests that these explanations are as likely *ex post facto* explanations as they may be *a priori* decisions.

Research has suggested that the decision to align with CBT comes more from personal factors, whereas traditional psychotherapy approaches come more from training experiences (Buckman & Barker, 2010). That is, if you have a particularly compelling personal training experience,

<sup>1</sup>I count myself among the smug.