

PROFESSIONAL ISSUES

Ethical Aspects of Heart Rate Variability Biofeedback

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Heart rate variability biofeedback is of increasing interest to clinicians and clients alike, due to its reported utility as both a diagnostic marker of adaptability and health, as well as an effective treatment approach for a variety of conditions. Still, it is new enough to not yet be considered a validated approach for most, if not all, applications. Issues of competence, informed consent, and home training all provide ethical challenges that must be addressed by practitioners if they are to avoid problems for themselves while maximizing benefits for clients.

Introduction

Biofeedback to impact heart rate variability (HRV) through the practice of controlled breathing is becoming more and more popular as research and clinical evidence is amassed. HRV is impacted by breathing and by the baroreflex system (Lehrer, 2007). This issue of *Biofeedback* provides extensive information on how HRV serves both as a diagnostic marker of adaptability and health and as a treatment approach for a wide variety of client problems.

The current status of clinical and research data raises a number of issues with ethical implications for the practitioner. Three issues will be discussed here: competence, informed consent, and home practice.

Competence

Each of us has a heart, and we know from personal experience that the rate at which our heart beats varies across different activities such as walking, running, sitting, or watching a scary movie. But have you ever tried to understand exactly what HRV or respiratory sinus arrhythmia is and how to measure it accurately? If you are going to provide HRV biofeedback, you should know these things and much, much more. Becoming competent to provide a specific modality of biofeedback for specific problems requires acquisition of more than intellectual knowledge. The practice guidelines and standards of the Association for Applied Psychophysiology and Biofeedback (AAPB) specify that a practitioner “has the knowledge to understand a particular client’s problem

and to formulate an appropriate treatment plan, has the skills needed to apply that knowledge effectively, and the judgment to use such knowledge and skills appropriately” (Striefel, 2004b, p. 27).

This means that a practitioner needs to have a broad base of knowledge. For example, he or she needs general and specific knowledge about human physiology and about how the heart and respiratory systems work, how they are interrelated, the factors that can impact each of them, and how each of them is involved in both the stress response and homeostasis. The practitioner is expected to be able to demonstrate competence in all areas related to what he or she does, but more important, to be competent enough so that no client is harmed and that, in fact, clients receive benefit by undergoing treatment. Cummings (1998) stated that clients have an ethical right to relief from pain and anxiety in the shortest time possible using the least intrusive treatment. As such, a competent practitioner should decide, based on the referral information, whether he or she is competent in the knowledge and skills needed to help this client and will accept as clients only those persons who are likely to benefit from the treatments that he or she can provide competently. This assumes that the treatments he or she can provide are viable and supported treatment options for the client’s presenting problem(s).

This decision-making process also can include decisions about the need for supervision and/or consultation, concomitant treatment by another health care specialist (e.g., a physician who addresses the medical aspects of the client’s condition), and whether it would be better for the client to be referred to a practitioner with a different set of treatment skills. The practitioner needs to remain cognizant of the fact that the treatment of choice for a particular client’s problem is not always within a particular practitioner’s scope of competence. It is unethical to not inform a client of the treatment of choice, if one exists (Striefel & Whitehouse, 2003). It can be tempting for a practitioner, who has just spent considerable time and dollars to become competent to provide HRV biofeedback, to suggest it as a treatment for a

client when the existing clinical and research data support a different treatment approach. HRV biofeedback is not the treatment of choice for everyone who comes to a practitioner with a clinical complaint, nor is it the treatment of choice for all clients complaining about some specific kind of problem (e.g., stress). No one treatment is effective or even appropriate for everyone who has a similar complaint. Different clients need different treatments because of differences in variables such as comorbidities, personal preferences, history of previous treatments, or even factors such as age.

A practitioner might well ask himself or herself questions such as those that follow.

1. What are the treatments of choice, if any, for this client's presenting problem?
2. What are the potential risks and benefits of each, including risks of side effects (Striefel, 2007)?
3. What clinical and research data exist in support of each of those treatments? Practitioners should not be using unproven methods if proven, effective methods exist, at least not without taking the client through a careful, thorough, and honest informed-consent process (Striefel, 2006). In fact, clients have the right to expect practitioners to be aware of and to inform them of the major alternative treatment options for their particular problem(s) and to be informed about the level of empirical support that exists for each of those treatment options (Calfee, 1998; Edwards, Dattilo, & Bromley, 2004; Striefel, 2005).
4. If considering HRV biofeedback, what advantages would it provide for this client? Is there a more supported or less costly treatment option (both in terms of dollars and time)?
5. Will the client's insurance company pay for the treatment option that I am proposing? If not, will it pay for another reasonable and appropriate treatment approach? A client has a right to be informed about insurance payment options.

Informed Consent

The concept of informed consent to treatment is useful in addressing some of the issues that can present serious problems for the practitioner if not addressed. Practitioners have an ethical obligation to inform clients about the limitations imposed by the client's insurance (Striefel & Whitehouse, 2003). Lawsuits against health care practitioners who failed to inform clients about such limitations during the informed consent process have been successful (Striefel & Whitehouse, 2003). So practitioners should inform clients about coverage items, such as what services are and

are not covered, the number of treatment sessions that the insurance company is likely to approve, options if a client needs more sessions than are likely to be approved, and the number of sessions of biofeedback that might be needed. Practitioners have an ethical obligation to not abandon a client in need (Nagy, 1998; Striefel, 2003). This includes not abandoning a client because his or her insurance has run out and the insurance company refuses to authorize additional sessions. A prudent practitioner considers such factors before proposing a particular treatment approach and keeps both the client and third-party payer informed throughout the process as appropriate and ethical (Striefel & Whitehouse, 2003).

If a practitioner is going to have a client use a home training device (such as the Stress Eraser discussed by Muench in this issue of *Biofeedback*), the client has a right to be informed and give (or withhold) consent on:

1. Whether the insurance company will pay for any costs associated with the home training sessions. Is there a current procedural terminology code for home training, HRV biofeedback sessions? Care must be taken to not engage in any fraudulent billing practices (Striefel, 2003; Striefel & Whitehouse, 2003).
2. What treatment options besides home training exist and what are the risks and benefits of each?
3. What research and clinical evidence exists to support the use of HRV biofeedback via home training and what support exists for the use of the specific home training device?
4. What should a client do if he or she experiences a negative side effect while undergoing home training or if an emergency treatment situation arises? Who does the client contact in that situation? What backup provisions has the provider made, especially if the client lives far away or in a rural and remote area? Practitioners have an ethical obligation to have available an emergency backup system that meets or exceeds the expected standard of care (i.e., one that is at least as good as that of other practitioners in the area where the client lives and where the practitioner practices).

The informed consent process needs to provide the client with all of the information needed for clients to be able to make reasonable decisions about treatment; prioritization of treatment goals; fees, billing, and collections; limits of confidentiality; insurance coverage and limitations; home training if it is to be used; and any other factors germane to the specific client and his or her treatment (Striefel, 2003). See the AAPB practice guidelines and standards for

more extensive coverage of what is to be covered during the informed consent process (Striefel, 2004a, 2004b).

If a practitioner proposes to use HRV biofeedback with a specific client for a specific problem, it is important to inform him or her about the level of support that exists for using that particular treatment. Is it considered to be a validated intervention for this client's presenting problem? Has the validation template developed by La Vaque et al. (2002) been applied to the treatment? If not, the treatment is probably not yet considered to be validated even if extensive clinical and research data support it. As such, the AAPB practice guidelines and standards require that informed consent be in written form (Striefel, 2004b).

Home Training

The use of home training biofeedback devices, like other technology use, is on the rise and offers many possibilities for decreasing costs in terms of time, travel, and per-session cost. Yet, to date there is a scarcity of published research on the risks and benefits of using such technology. At the same time, I have not seen any evidence of harm to clients or problems for practitioners when such devices are used. No problems should arise, provided that certain precautions, such as those that follow, are taken.

1. Be sure to be in compliance with the Food and Drug Administration rules and regulations, especially those having to do with claims made and "off-label" use.
2. Be sure to be in compliance with state and federal laws (e.g., the Health Insurance Portability and Accountability Act rules on protected health information and the state licensing laws that specify who can do what).
3. Be sure to see the client in the office for the evaluation, diagnosis, treatment plan formulation, and initial treatment implementation before initiating home training. Home training should be an integral part of the client's treatment plan.
4. Have in place an emergency backup system to provide coverage during nonoffice hours and/or emergencies. The client needs to be informed about the backup system and how to access it, as required by the AAPB practice guidelines and standards (Striefel, 2004b). Of course, the backup system has to be functional so that a client does not feel abandoned if he or she tries to use it. Health care practitioners can be and have been sued successfully on the grounds of abandonment (negligence) when a client experienced an emergency and could not access the practitioner or his or her emergency backup system in a reasonable amount of time. Clients in pain often become angry in such situations, and angry clients are more likely

to sue than are those who get timely help (Striefel, 2004a). See Striefel (2004a) for a more complete discussion of the things to cover in an emergency backup system.

5. Have a periodic face-to-face session with a client undergoing home training and/or have periodic telephone contacts to evaluate progress, to make adjustments in the treatment plan, and to deal with any other issues that arise.

Summary

The issues discussed in this article, along with the application of ethical principles and guidelines to them, are not unique to HRV biofeedback. These principles apply whenever a newer treatment approach, a new application of an existing approach, or an alternative therapy is proposed to a client as part of a treatment plan to address the client's presenting complaints. Many of the techniques and therapies practiced in the biofeedback and neurofeedback clinic are at least slightly outside the mainstream—they are *not* the most commonly proposed interventions that the typical behavioral health or medical practitioner would propose for everyday disorders. This is due in part to many health care practitioners not being familiar with these approaches and in part to the lag that exists between clinical applications that are on the forefront of treatment and the research needed to support those newer interventions. Research evidence does support the effectiveness of many biofeedback and neurofeedback techniques for a wide range of disorders (Yucha & Gilbert, 2004), yet these techniques are not yet in the center of the mainstream. For this reason, the principles proposed in this article should become everyday knowledge for every practitioner in order to inform treatment planning with a wide variety of clients. And, of course, to help protect practitioners against claims of negligence or accusations of engaging in unethical behavior.

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