Biofeedback has the potential to greatly impact primary care medicine. This article describes how this could happen based on some preliminary data where an Applied Psychophysiology practitioner was “embedded” in primary settings to treat functional disorders such as fibromyalgia, myofascial pain, and irritable bowel syndrome.

Introduction
An area of yet unrealized potential for Applied Psychophysiology (AP) is in the primary care medical setting (PCMS). It is well documented that a large portion of primary patient visits are precipitated by “mind/body” or “functional disorders” such as chronic pain (Bonica, 1990; Holdbrook, Grazier, Kelsey, & Stauffer, 1984), fibromyalgia (FM) (Bombardier & Buchwald, 1996; Wolfe, et al., 1997), noncardiac chest pain (NCCP) (Pearce, Mayou, & Klimes, 1990; Potts & Bass, 1995; van Peski-Oosterbaan, 1998; van Peski-Oosterbaan, Spinhoven, van der Does, & Bruschke, 1998), irritable bowel syndrome (IBS) (Drossman, Whitehead, & Camilleri, 1997; Everhart & Renault, 1991; Horwitz & Fisher, 2001; Thomspson, Longstreh, & Drossman, 2000), or anxiety with somatic symptoms (Katerndahl, 1997; Katerndahl & Realini, 1997). Traditional medical approaches have not been very effective with these disorders, and the potential for financial, emotional, and humanitarian impact is great. The mismatch between etiological and treatment models has been shown to produce a great deal of patient and physician frustration and excessive costs.

Based on this foundation, it is proposed that the introduction of AP interventions can produce positive outcomes. The potential for patient physical and emotional benefits, physician satisfaction, and financial benefits are great. For both primary and specialty settings, I will describe what a primary AP program might look like and how it would work. Various economic models are discussed as well.

Essential Elements
Although many models are possible, they all share several essential elements:

The first element is location, location, location. No, I haven’t wandered off into a real estate treatise. We have found that placing AP services directly in the PCMS is highly desirable. This is probably because having the AP practitioner as a part of the medical team greatly reduces perceived stigma and facilitates the logistics of the referral. A referral for an outside practitioner can work, but it requires a lot of motivation for the client and referrer. In our experience, there is an 80/20 versus 20/80 split when using an in-house referral for biofeedback.

The second element is physician education. Another reason location is important is that by having AP practitioners in the medical settings, many opportunities for physician education are present. I would recommend a two-stage program. Stage I consists of in-service or grand rounds for the physicians by a “technical expert.” Try and find someone with great experience or academic stature. In our study (Ryan & Gevirtz, 2004; Ryan & Gevirtz, 2001), I put together a fairly technical PowerPoint presentation and did a demonstration with a medical doctor volunteer being “hooked up.” I demonstrated the full array of peripheral modalities (heart rate, finger temperature, skin conductance, heart rate variability, respiration, surface electromyography, etc.) and put the volunteer through a brief stress profile followed by a 6 per-minute paced breathing demonstration. The goal was to demonstrate that biofeedback is now a sophisticated technical endeavor, not an unscientific, naïve procedure. The emphasis was on the models for the disorders mentioned above so that it would make sense to the physician. For each of the disorders, I included written material and references for online information. Many of the disorders have websites to support both patients and physicians (e.g., the National Fibromyalgia Association website for FM).
I have elucidated this mediational model elsewhere (Gevirtz, 2007). A model that explains how psychological factors can lead to physiological changes, which in turn can lead to physical symptoms, seems to change the way physicians look at these disorders. I often use IBS as an example since it is so common in PCMS and so difficult to treat.

The workshop concludes with specific instructions for the physician on how to make a referral. The physician should (1) emphasize the physical nature of the disorder, (2) cast biofeedback as more mainstream than alternative, (3) include a brief explanation of the specific disorder that emphasizes the Autonomic Nervous System, and (4) refer to the AP practitioner by name.

The second stage of the education comes in short opportunities to feed back progress to referring physicians. This can happen formally in case meetings, but usually occurs informally in the hallway or lounge. Turning around a difficult patient is worth a thousand publications. Since space is almost always at a premium in medical settings, we use laptops and set up anywhere we can.

The third element is not to step on the mental health practitioner’s toes. Most often, the PC facility has a formal relationship to a mental health clinic or department, or perhaps certain private practitioners. We find it beneficial to use these networks for any mental health issues that arise during the biofeedback, even if we feel we could treat them ourselves. This seems to reduce the “territorial” tensions so common to most medical entities. Furthermore, it keeps the physicians focused on the psychophysiological nature of the problem. Of course, the demarcation between the physical and psychological is never that clear, but when in doubt, refer it out.

In conclusion, AP can be an important component of PCM if we can make our case to the powers that control the flow of resources in medical settings. The potential cost savings appear to be substantial, and the human suffering that can be reduced is not a trivial matter. We are trying to provide research support for these propositions and encourage others to do the same.

References


[Unexplained non-cardiac chest pain; Its prevalence and natural course]. *Nederlands Tijdschrift Voor Geneeskunde*, 142, 2468–2472.


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