In Response

Psychological Behaviorism Theory of Pain: Has its Time Come?

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Has the time come when we are ready to embrace a unified theory of pain? Dr. Thompson's affirmation in his letter of the benefits to be gained from a multidisciplinary, collaborative approach to pain and his call for pain physicians and pain psychologists to reconsider "fundamental assumptions on both sides" suggest there is a need for such a theory. In fact, Dr. Thompson warns that unless we act, "changes in insurance reimbursement patterns" will soon make collaboration impossible. And guess what? I've done some serious thinking about this problem over the years and, along with two psychologists, my father Arthur Staats and Hamid Hekmat, produced a theory that we believe will fit the bill (1).

When I entered the field of pain medicine, I found a great dichotomy in the standard approaches to pain. Neurosurgeons would attempt to cut it out, neurologists to dose it with drugs, and behaviorists to eliminate it by adjusting behavior. The behaviorists' based their strategy on the understanding that reinforcement causes patients to reproduce behavior and on theories published in major journals that identified the generator of back pain as the patient's problematic behavior and our disability system. In 1995, the International Association for the Study of Pain's *Task Force on Pain in the Workplace* went so far as to recommend ending reimbursement for medical services and wage replacement in employees suffering from non-specific low back pain "with passage of six weeks without return to work"(2). The rationale behind this proposal was that if we stopped "rewarding" non-specific low back pain with reimbursement and wage replacement, the pain would somehow miraculously go away.

After I started running a very busy interventionally-based clinic, I became increasingly puzzled by this dogmatic behaviorist interpretation. Not only could I not always schedule a patient visit within six weeks, my orientation led me to try conservative therapies first. The proposed time limit would make it impossible, however, for me to follow this treatment approach and then proceed to "state of the art" interventional therapies if needed.

Eventually my curiosity led me to search the literature for the origin of this approach, and I found that the behaviorists referenced a well-known psychologist, Jack Michael of the University of Washington, who had demonstrated that abnormal behavior, such as complaining, not getting out of bed, moaning, and grimacing, could be increased if reinforced and decreased if ignored—the concept that Fordyce had applied to pain behavior (2). This was the same Jack Michael who had worked with my dad, the psychologist Arthur Staats.

I naturally discussed this situation with my father and explained how the behaviorists in one camp were asserting that therapeutic procedures and drugs reinforced pain behavior, while the interventionalists in the other camp were charging that the psychologists were therapeutic nihilists who obviously missed the source or "biology" of pain. He shook his head and told me that Jack only got half the story—that he had neglected the important relationship between emotions and pain.

After talking this over with Hamid, who had conducted related research in pain, the outlines of a unified theory of pain oc-

curred to me. The psychological behaviorism theory of pain that we came up with is comprehensive and provides a unifying framework for consideration of the various "levels" involved in pain—biology, learning, pain behavior, cognition, emotions, personality, and social context. Among these levels, a patient's emotional state plays a fundamental role as the central translator of nociception into pain behavior.

Our theory is comprehensive because it integrates and acknowledges the specific contributions of the various theoretical approaches to pain and the benefits to be gained by following a multidisciplinary treatment plan. A specialist working without a unifying theory is likely to see only part of a patient's problem yet believe that he or she is seeing and treating the whole problem. Our framework allows the "complete pain physician" to see every aspect of the patient's problem and to act as a sort of hands-on general contractor, locating the various places where interventions may be helpful and either performing the interventions or finding the most appropriate medical specialist to do so. Communication between the complete pain physician and this specialist is enhanced if the specialist shares the pain physician's theoretical understanding of the various realms of pain and how they are united. This allows the physicians to approach pain with a common terminology, which is a great advantage for treatment and research.

When we sent our paper for publication, the first journal rejected it out-of-hand. It seems that we ran headlong into the "competitive tension and distrust between behavioralists and interventionalists" that Dr. Thompson cites today. In our case, neither side was willing to endorse a theory that acknowledged the equal and simultaneously important contribution of both approaches. Instead, the opposing contingents were happy to enlist the strength of the status quo to reject a theory that departed from the agreed-upon paradigm—a paradigm that fostered competition and exclusion rather than collaboration and unification.

After we published our paper, we conducted a series of experiments based on our theory and demonstrated how the personality trait of anxiety (that has a negative impact on emotions) can increase the experience of pain and associated pain behavior (3). By applying our theory, we also were able to describe the nature of the placebo and how placebos can affect pain experience and behavior (4,5). Because they were based on a comprehensive theory, these studies are relevant to psychology as well as to medicine.

Theories explaining change that has occurred are generally welcomed; those that herald change are often resisted. In the end, the resistance our theory encountered and that Dr. Thompson sees in his practice will yield to the type of "intensive dialogue" Dr. Thompson is promoting. Acceptance of the worthiness of the contributions of different fields—like pain medicine and pain psychology—will be the first step toward bringing the disparate fields into a unified and unifying framework that will support a common terminology, recognize the myriad aspects of pain, and ultimately improve patient care.

Dr. Thompson began with comments on a quote from Sir William Osler, and I will end the same way. During Osler's lifetime (1849-1919), syphilis was an endemic disorder that invaded multiple organ systems, and Osler said:

He who knows syphilis knows medicine. Syphilis simulates every other disease. It is the only disease necessary to know. One then becomes an expert dermatologist, an expert laryngologist, and expert alienist, and expert occultist, an expert internist, and expert diagnostician.

Today, because the treatment strategies for pain are not the province of a single discipline, and the complete pain physician must view the patient's need comprehensively, Osler's paradigm might be updated to read:

Whoever knows pain, knows medicine. Pain affects every organ system. Treating pain requires the pharmacology of the anesthetist, the compassion of the complementary physician, the technical skills of the surgeon, the diagnostic skills of the radiologist/internist, the rehabilitating skills of the psychiatrist and physiatrist, and the innovation of the scientist. Rather than becoming an expert in each of these disciplines, the complete pain physician who understands the unified theory of pain will supplement his or her particular expertise by becoming an expert at multidisciplinary consultation and collaboration.

References

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