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Psychological Treatment for Chronic Pain: Improving Access and Integration

Beth D. Darnall

Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine

For decades, science has supported commonly used and evidence-based psychological treatments for chronic pain. In their important and timely article, Driscoll and colleagues (2021; this issue) provide historical context on the conceptualization of pain as a biopsychosocial experience and the treatment of pain with psychological approaches. In recent years, there has been increased focus on treating chronic pain with nonpharmacologic and psychological approaches. Federal agencies have published new systematic reviews on psychological treatments for chronic pain (Chou, 2017; Skelly et al., 2020), and the U.S. media have dedicated attention to the topic, particularly within the context of the opioid crisis. Funding opportunities for research investigating the efficacy, mechanisms, and comparative effectiveness of psychological treatments for pain have expanded at the National Institutes of Health and other U.S. funding agencies and institutions. Driscoll and colleagues nicely lay a foundation for understanding what is needed to move forward both psychological science and practice and to achieve improved outcomes for patients with chronic pain. Here, I briefly expand on directions for the future of psychological treatment for pain, with an emphasis on the truism that “access is everything,” and also give attention to the heterogeneity of pain, the benefits of patient-centered approaches, and how technology may be leveraged to support patients and clinicians alike.

Psychological Treatment as, Simply, “Pain Care”

The International Association for the Study of Pain (1994) identified psychology as an integral aspect of the pain experience and included it thusly in its definition of pain. Despite such recognition and designation, broad integration of psychological approaches into pain treatment remains limited. As Driscoll and colleagues outline in detail, one of the many impediments to integration is health-care providers’ incomplete understanding of the role of psychology in the treatment of pain. Indeed, health care providers may

Corresponding Author: Beth D. Darnall, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, bdarnall@stanford.edu.

Declaration of Conflicting Interests

B. D. Darnall is a principal investigator for research funding from the National Institute on Drug Abuse and from the Patient-Centered Outcomes Research Institute specifically for research on prescription opioids or opioid tapering in chronic pain. She is chief science advisor at AppliedVR. She has authored five books on pain and opioids and receives royalties for four. She has received consultancy fees from axialHealthcare for developing educational materials for physicians on safely prescribing and deprescribing opioids. She serves on the board of directors for both the American Academy of Pain Medicine and the Institute for Brain Potential. She is a scientific member of the National Institutes of Health Interagency Pain Research Coordinating Committee and serves on the Centers for Disease Control and Prevention’s Opioid Workgroup.

describe psychological treatments reductively or refer patients far outside the optimal window of timing for treatment. Clinically, psychological treatment is often recommended after multiple pharmacological or physiological treatments have failed. Yet the chronology of treatments matters: Patients' expectations for positive results (placebo) decay following such treatment failures, thereby undermining the outcomes of the next pain treatment—in this case, psychological treatment (Colloca & Benedetti, 2006). Evidence from the broader pain literature supports the idea that psychological and behavioral treatment options should be offered at the outset of pain care. A recent *Lancet* scientific review by a consensus panel of experts on back pain concluded that pain education and cognitive-behavioral therapy for chronic pain (CBT-CP) should be first-line treatments, not treatments of last resort (Foster et al., 2018). However, much work remains to achieve this goal.

Successful early implementation of psychological approaches will require a clinical cultural transformation that diminishes clinicians' perceptions of psychological treatment as “complementary” or “alternative” to biomedical treatment (Darnall, 2018a). Medical clinicians can benefit from properly understanding and appreciation of the role of psychology in altering the function and structure of the central nervous system (Jiang et al., 2016; Seminowicz et al., 2013) so that they, in turn, can effectively explain to patients how and why psychological treatments will benefit them. Rather than describing psychological treatment as “pain coping skills,” which patients hear as “learning to cope with pain,” psychological treatment may be described more accurately as directly reducing the intensity of pain and favorably shaping the nervous system toward relief (Cherkin et al., 2016; Darnall et al., 2021; Seminowicz et al., 2013) by entraining adaptive responses. Indeed, effect sizes for psychological pain treatments in some studies have been similar or superior to those of some biomedical treatments. Ideally, psychological treatment should be applied early and offered to all patients within the context of ongoing pain treatment.

Addressing Poor Access

A clinical cultural transformation alone will be insufficient for transcending the many accessibility and equity issues that persist in pain care nationally. In recent years, recognition of the limited access to psychological treatment has led to multiple calls for dedicated efforts to remove barriers to this needed care (Darnall et al., 2016; Institute of Medicine, 2011; U.S. Department of Health and Human Services, 2016b, 2019). Estimates suggest that 100 million Americans are living with ongoing pain of some type, a fraction of which meets the definition of chronic pain or “high-impact” chronic pain (Institute of Medicine, 2011). The 2016 National Pain Strategy included a public-health model for preventing pain in which patient education and early intervention are critical (U.S. Department of Health and Human Services, 2016b). Furthermore, a 2019 report from the Department of Health and Human Services Pain Management Best Practices Inter-Agency Task Force specifically cited poor access to psychological and behavioral treatment for chronic pain as a critical gap in pain care (U.S. Department of Health and Human Services, 2019).

Accessibility concerns are particularly salient within the context of COVID-19. COVID-19 placed broad restrictions on the receipt of in-person care and fostered a boon in digital and online individual and group psychological treatments for chronic pain (Eccleston et

al., 2020). Many patients have benefited from Internet-delivered treatment and the patient-centered convenience of home-based care, which have increased the uptake of psychological and behavioral interventions for pain. A key takeaway is that attending to the needs and wants of patients in the design and delivery of psychological pain treatments can make those treatments more convenient and therefore more accessible.

Increasing patients' access to effective psychological treatment for pain is predicated on improving psychologists' training in treating chronic pain. Indeed, continuing pain education for therapists and the integration of pain education into curricula at all stages of undergraduate and graduate medical education are needed to train the current and future workforce in pain care (Darnall et al., 2016). As an important first step, in 2020, the American Psychological Association pain task force began offering psychologists 1-day workshops on the psychological treatment for chronic pain. This educational content will be made available digitally and at no cost in 2021.

Solutions: Efficient and Scalable Treatments

The vast scope of the problem of pain requires the development of new and scalable behavioral approaches to pain treatment to meet the needs of patients. Driscoll and colleagues discuss novel uses of telehealth and technology to address proximity-based barriers and promote access to effective pain care (e.g., Heapy et al., 2017). Brief and efficient psychological and behavioral treatments may similarly improve patients' access to pain care while reducing the burden of treatment. For instance, effective single-session behavioral treatments could help address the needs of a population with pain. Indeed, four randomized trials have shown that single-session treatments can substantially improve multidimensional chronic-pain outcomes (Carty et al., 2019; Darnall et al., 2021; Ziadni et al., 2018; Ziadni et al., 2021; Ziadni et al., in press). Clearly, brief interventions will be insufficient for some patients; however, they may be particularly convenient and feasible for many others. Such brief interventions may be offered at the outset of treatment to ensure that patients gain the proper understanding of the role of psychology in pain management and what they can do to best manage their pain and other symptoms. Additional advantages of brief interventions include the potential for rapid access to care, easier inclusion into integrated primary-care or other medical settings, and standardization of treatment. The latter can also ensure greater rigor and reproducibility in research because receipt of treatment is binary (yes/no), so attrition is mitigated, and replication is better ensured with standardization of care. Single-session formats may also help reduce stigma related to psychological treatment and increase patients' willingness to engage in more intensive psychological treatments.

Indeed, a great need remains for multisession treatments such as the 8-week CBT-CP or 9-week mindfulness-based stress reduction described by Driscoll and colleagues. A primary conclusion is that all treatments must be available to patients before we can match patients to the treatment that is right for them. Having said that, I am often asked, "What is the best behavioral treatment for chronic pain?" As Driscoll and colleagues point out, CBT-CP has the best evidence behind it, but at the end of the day, the best treatment is the one the patient will engage in. No treatment works if it is not accessed. We talk a lot about whether

patients have access to the treatments we offer and the barriers that prevent patients' access (e.g., insurance, costs). We talk less about whether the treatments themselves are practical and feasible for patients who often have little financial means and are managing jobs, health problems, and home responsibilities that may impede their engagement in treatment. Ensuring that behavioral treatments are accessible and convenient—truly patient-centered—remains an important goal and topic for future study.

Digital Behavioral Treatments

The future will undoubtedly include a host of brief, digital pain treatments that are available on demand and tailored to the patient population. As the field evolves, patients may acquire effective and evidence-based pain-management skills through a variety of media and technologies, even if the deeper individual and group work remains in psychologists' wheelhouse. For some patients, pain “digiceuticals,” or digital health tools and services, may obviate the need for individual support or longer courses of treatment. The future of psychological treatment may see treating psychologists expanding their prescription of home-based technologies for pain (e.g., apps or therapeutic skills-based virtual reality programs) to provide patients with effective, standardized, high-quality daily support within the context of an ongoing psychotherapeutic relationship. Such evidence-based supports may also help to bridge the gap between patients' needs and psychologists' expertise.

Psychological Treatments and Reductions in Opioid Use

The topic of opioids for chronic pain is a critical inclusion in Driscoll and colleagues' article, given the current focus on reducing opioid use in the United States. The authors note national calls to reduce the prescription of opioids and detail evidence-based psychological treatments that may serve as alternatives. Though such efforts may be hailed as positive steps toward comprehensive pain care, they also raise several points of caution and concern. First, as Driscoll and colleagues point out, access to psychological treatment is far from universal, and until that issue is addressed, implementation will remain infeasible for most patients. Second, people with the least means are likely to have the most difficulty accessing effective psychological treatment, and without that option, curtailing opioid prescriptions could exacerbate existing disparities in pain care. Third, we are cautioned against a reductive subtext that opioids are ineffective for everybody and psychological treatment for pain is effective for everybody: Both are false. It is important to remember that no treatment works for all, and no treatment is wrong for all. Each person has unique circumstances, complexities, and comorbidities that require a truly individualized approach to treatment. Finally, a binary perspective pitting pharmaceutical against psychological treatment is harmful. In the past, pain treatment was predominantly pharmaceutical, and opioids were emphasized to a much greater degree than psychological approaches. The reversal of this duality reflects the same pattern; ultimately, it serves few and continues to separate treatments rather than integrate them. Optimal pain treatment is both patient-centered and integrated, as Driscoll and colleagues point out. However, outside of the Veterans Health Administration and resource-rich academic medical settings, integrated care often exists in concept only.

Applying Patient-Centered Strategies to Enhance Engagement in Treatment

Research has revealed that contextual factors and patient–provider interactions are key drivers of outcomes from pain treatment. Furthermore, psychological factors, including expectations about pain (Alter et al., 2020; Fields, 2018), expectations about the effectiveness of treatment (Atlas & Wager, 2012), and the perceived controllability of pain (Muller, 2012) play critical roles in pain and analgesia. The area of opioid prescribing provides a useful illustration. For patients who have been taking prescription opioids for long periods, the specter of reducing their opioid doses (tapering) may elicit fear, anxiety, and anticipation of greater pain—psychological factors that directly amplify pain. Indeed, experimental research has shown that heightened nocebo responses increase pain intensity and reduce opioid analgesia (Bingel et al., 2011). Thus, in cases of nonconsensual or forced reductions in opioids, patients’ expectations, fears, and low control may interact and result in poor and even tragic outcomes, including suicidality and suicide (Demidenko et al., 2017; Mueller et al., 2021; Oliva et al., 2020). In 2019, the Department of Health and Human Services issued guidelines on opioid reduction and called for a patient-centered approach that includes consensual tapering whenever possible, tapering plans that account for patients’ dynamic responses, and the inclusion of psychological supports (Dowell et al., 2019).

Multiple federally funded research projects are currently testing the use of evidence-based psychological and behavioral treatments (e.g., CBT-CP, mindfulness-based stress reduction, and the Chronic Pain Self-Management Program) to treat pain while supporting reductions in prescription opioid use. Along with these treatments, deliberate integration of nocebo-reduction strategies could help address the specific psychological needs of patients with pain. In this vein, psychological treatment is not solely a multisession ancillary treatment. Rather, therapeutic psychological elements are integrated into the practice of biomedical pain care, with careful attention to the patient–provider dynamic, to enhance patients’ expectations, control, and outcomes (Atlas & Wager, 2012; Wager & Atlas, 2015). This area is ripe for further research, as Driscoll and colleagues note.

In multidisciplinary and integrated-care settings, patients’ engagement may be enhanced in other ways. For instance, the *coproduction model* emphasizes optimizing patients’ engagement and treatment outcomes through patient inclusivity and shared decision making (Batalden et al., 2016). A coproduction approach fosters patients’ internal locus of control and enhances their relationship to their care by addressing systemic flaws in medicine that disempower patients. Shared decision making promotes patients’ trust and expectations for positive outcomes as natural outgrowths of a clinical environment that they experience as respectful, caring, and attentive to their needs and wants. Recent progress in this area has seen the advent and growth of patient advisory boards that are integrated into clinical-care settings, research projects, and national and international pain associations. Such patient inclusivity makes possible our examination of a critical question: How can we better meet the clinical needs of patients with chronic pain?

Addressing the Heterogeneity of Chronic Pain

Driscoll and colleagues highlight the complexity of chronic pain and the need for intensive psychological supports and integrated care among patients with severe pain or complex needs. For instance, psychological trauma and mental health conditions commonly co-occur with chronic pain, individuals with high-impact chronic pain may have functional impairments in multiple domains, and capacities for self-care may be limited by a combination of biopsychosocial factors. Psychological treatment often plays an essential role in pain management and functional improvement when delivered in the context of “whole-person” care. Yet as the authors point out, such intensive programs remain inaccessible to most patients outside of the Veterans Health Administration and the worker’s compensation system. Recent models of integrated pain care in primary-care settings, initiated and studied in the Veterans Health Administration, hold promise for translation and extension into civilian health care settings. Ultimately, favorable reimbursement models will be required to incentivize the development and expansion of such programs throughout the United States and foster the infrastructure that will facilitate patients’ access to specialized and integrated pain treatment.

Bringing Forward Patients’ Voices in Clinical Data: Learning Health Care Systems

Regarding data and research, Driscoll and colleagues aptly note that more pragmatic and implementation trials are needed to translate laboratory-based research to real-world clinical settings. Indeed, real-world studies tend to include more diverse and heterogeneous patient samples, thereby enhancing the external validity and generalizability of their results.

Consider how the efficacy of psychological treatments for chronic pain might be affected by the research context. For instance, several Cochrane reviews have demonstrated small to moderate effects of CBT-CP on pain-related catastrophizing and depression (Williams et al., 2012, 2020). The authors of these meta-analyses acknowledged variability in the studies’ methods, treatment protocols, patient populations, and therapists. By contrast, rigorously performed CBT-CP research conducted by two independent research teams—both adhering to the same efficacious protocol to treat patients with chronic low-back pain—evidenced effects that exceeded the breadth and magnitude of those reported in the Cochrane review (Cherkin et al., 2016; Darnall et al., 2021; Turner et al., 2016). It may be tempting to conclude that CBT-CP is particularly effective for chronic low-back pain, but an alternative consideration is that the quality of the protocol, the therapists’ training, and the context of the environment matter greatly. Although not all of these factors are modifiable, the use of CBT-CP protocols that have evidenced relatively large effect sizes (Stoelb et al., 2012; Thorn et al., 2018) could improve the quality of the psychological science and the conclusions we draw from it. Better scientific results would bolster patients’ expectations, thereby optimizing their engagement and, ultimately, their treatment outcomes.

Pragmatic pain research and optimal care can be supported by technological infrastructure. The National Pain Strategy identified *learning health care systems* (Institute of Medicine, 2012) as viable tools for systematically collecting patient-reported data in clinical settings,

identifying patient treatment needs, and delivering precision pain care (Institute of Medicine, 2011). Integrating multidimensional patient-reported data into learning health care systems allows for the whole-person characterization of treatment needs and the application of tailored behavioral and psychological treatment plans (Darnall, 2018b). For instance, Driscoll and colleagues note that psychological trauma is a key factor that often requires specific treatment, such as emotional-awareness and expression therapy. Left unaddressed, trauma can impede patients' responses to both pain treatment and general psychological treatment. Therefore, automated trauma screening could allow for early identification and treatment—one strategy to help position patients for favorable response to medical and psychological treatments for pain.

Furthermore, the collection of data on outcomes is automated within the learning health care system. Those data can be integrated into electronic medical records to facilitate the implementation of pragmatic clinical trials examining the impact of psychological treatment on health care utilization, a priority research gap highlighted by Driscoll and colleagues' review and by the Federal Pain Research Strategy (U.S. Department of Health and Human Services, 2016a).

Conclusion

Psychological treatments for chronic pain have been studied for decades and have strong supporting evidence. Imagine a future in which practitioners can make evidence-based psychological treatments broadly available to patients at the outset of their pain, thereby favorably altering the trajectory of their health. Increasing patients' early access to psychological treatment will require us to meet patients where they are—both at home and in the clinic. We are invited to reconceptualize how treatment accessibility might be equitably achieved, at the lowest cost and lowest burden for patients, while still addressing the heterogeneity of pain. The emphasis on multidimensional patient-reported outcomes reveals new opportunities for targeted psychological treatments and their integration into whole-person pain care.

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