




Beth Darnall

Professor of Anesthesiology, Perioperative and Pain Medicine (Adult Pain) and, by courtesy, of Psychiatry and Behavioral Sciences (General Psychiatry & Psychology (Adult))

 Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Stanford Pain Management Center**

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Beth Darnall, PhD is Director of the Stanford Pain Relief Innovations Lab. She leads NIH and PCORI-funded clinical trials that broadly investigate behavioral medicine for acute and chronic pain, including \$19M in research funding from the Patient Centered Research Outcomes Institute (PCORI). She serves as faculty mentor to junior investigators who are Stanford Pain NIDA T-32 post-doctoral research fellows, NIDA K23 awardees, and through the Stanford CTSA. In 2021 she received a K24 research and mentoring award from NIDA.

Her primary interests are developing and investigating novel pain treatments that are scalable, effective, and low burden. She is creator of "Empowered Relief", a single-session evidence based pain management intervention, and principal investigator for a 6-site \$11M national randomized comparative effectiveness trial of online "Empowered Relief" vs. online 8-session cognitive behavioral therapy in diverse patients and pain conditions in the U.S. (funded by PCORI; 2022-2027). She and her team provide international clinician certification workshops for "Empowered Relief" (<https://empoweredrelief.stanford.edu/>). "Empowered Relief" is delivered in 16 countries, 7 languages, and is the subject of international research. In 2021, results for an NIH-funded randomized trial of "Empowered Relief" published in JAMA Network Open. Also in 2021 a second randomized trial of online-received "Empowered Relief" showed efficacy in mixed-etiology chronic pain 3 months after treatment (Ziadni et al). Digital analgesic innovations include on-demand, skills-based, self-regulatory treatment for perioperative patients ("My Surgical Success", showing extended pain relief 3 months after surgery (Ziadni et al, 2022), and virtual reality for acute and chronic pain (she is chief science advisor at AppliedVR). The broad goal of this collective line of research is to dismantle barriers to effective behavioral medicine for pain and health.

She leads the PCORI-funded EMPOWER study, a 7-site (5-state) pragmatic randomized controlled clinical trial that is investigating how to best help physicians and patients successfully, safely, and voluntarily reduce long term opioid use and chronic pain using patient-centered methods. EMPOWER is a 3-arm RCT comparative effectiveness trial of two evidence-based behavioral treatments, cognitive behavioral therapy for pain and chronic pain self-management, applied within the context of patient-centered opioid tapering (N=1365). This research builds on the team's first report on "Patient-Centered Prescription Opioid Tapering in Community Outpatients with Chronic Pain" (Darnall et al, JAMA Int Med, 2018). Learn more about the EMPOWER study at <https://empower.stanford.edu/>

Darnall three times briefed the U.S. Congress on the opioid and pain crises, and provided invited testimony to the FDA on iatrogenic harms associated with opioid tapering, and in 2022 advised the Federation of State Medical Boards. In 2020 she joined the NIH Interagency Pain Research Coordinating Committee as a scientific member. From 2020-2021 she served as a scientific member of the Centers for Disease Control (CDC) Opioid Workgroup of the Board of Scientific Counselors of the National Center for Injury Prevention and Control (BSC/NCIPC).

Her work has been featured in outlets such as The New York Times, Wall Street Journal, Scientific American, NPR Radio, BBC Radio, and Nature. In 2018 she spoke on the psychology of pain relief at the World Economic Forum in Davos, Switzerland.

ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Anesthesiology, Perioperative and Pain Medicine
- Professor - University Medical Line (By courtesy), Psychiatry and Behavioral Sciences
- Member, Wu Tsai Human Performance Alliance

ADMINISTRATIVE APPOINTMENTS

- CDC Opioid Workgroup (BSC/NCIPC), Board of Scientific Counselors of the National Center for Injury Prevention and Control (BSC/NCIPC), (2020-2021)
- NIH Interagency Pain Research Coordinating Committee (IPRCC). Scientific member., National Institutes of Health, (2020-2022)
- Co-Chair, Acute Pain Task Force, Stanford Hospital, (2019- present)

HONORS AND AWARDS

- Presidential Commendation, Distinguished Service Award, American Academy of Pain Medicine (2022)
- FDA Network of Experts in Digital Health Technologies, Center for Devices and Radiological Health, U.S. Food and Drug Administration (2020)
- Digital Behavioral Medicine for Pain Relief and Opioid Reduction (invited speaker), NIH 15th Annual Pain Research Consortium Symposium (2020)
- Opioid Tapering Iatrogenic Risks (invited testimony), U.S. Food and Drug Administration (2019)
- Pain and Opioid Crisis in America (invited speaker), U.S. Congressional Briefing (2018)
- Non-pharmacologic Treatment for Chronic Pain (invited speaker), National Academy of Science, Engineering and Technology (2018)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Academy of Research Mentors in Anesthesiology (ARMA), Invited member, Foundation for Anesthesia Education and Research (FAER) (2022 - present)
- Medical Advisory Board, Facial Pain Association (2022 - present)
- Scientific Advisory Board, National Pain Advocacy Center (2021 - 2022)
- Co-Chair, 2022 annual conference, American Academy of Pain Medicine (2021 - present)
- Board of Directors, American Academy of Pain Medicine (2021 - present)
- Scientific Member, NIH Interagency Pain Research Coordinating Committee (IPRCC), National Institutes of Health (2020 - present)
- CDC Opioid Workgroup Member, Centers for Disease Control and Prevention (CDC) (2020 - 2021)
- Network of Experts in Digital Health Technologies, Center for Devices and Radiological Health, U.S. Food and Drug Administration (2020 - present)
- Editorial Board, MedPage Today (2020 - present)
- Board of Directors, Institute for Brain Potential (2020 - present)
- Chief Scientific Advisor, AppliedVR (2019 - present)
- Co-Chair, Behavioral Medicine Committee, American Academy of Pain Medicine (2019 - present)
- Opioid Guideline Task Force, American Academy of Pain Medicine (2019 - present)
- Interagency Pain Research Coordinating Committee (ad hoc member), National Institutes of Health (2019 - 2019)
- Opioid Advisory Committee, American Academy of Pain Medicine (2017 - present)

- Scientific Review and Guidelines Committee, American Academy of Pain Medicine (2017 - present)
- ACOEM Committee Member and Co-Author, ACOEM Chronic Pain National Guideline (2016 - 2017)
- Education Initiatives Working Group, International Association for the Study of Pain (2016 - 2018)
- APS Clinical Resources and Guidelines Committee, American Pain Society (2015 - 2018)
- Committee on the Principles of Analgesic Use in the Treatment of Chronic Pain and Cancer Pain, American Pain Society (2014 - 2016)
- President, Pain Society of Oregon (2012 - 2012)

PROFESSIONAL EDUCATION

- PhD Training: University of Colorado at Boulder (2002) CO
- Fellowship: The Johns Hopkins University (2004) MD
- Internship: Southern Arizona VA Healthcare System (2002) AZ

COMMUNITY AND INTERNATIONAL WORK

- Stanford Free Back Pain Education Day 2015, Stanford University
- Stanford 2014 Free Chronic Pain Education Day, Stanford University
- Mirror therapy certification workshops for physicians, trauma, and healthcare providers in Vietnam, Can Tho, Dong Ha, and Hanoi, Vietnam

LINKS

- Stanford Pain Relief Innovations Lab: <https://med.stanford.edu/pril>
- "Empowered Relief" clinician certification workshops: <https://empoweredrelief.stanford.edu/>
- Personal website: <https://bethdarnall.com>
- Division of Pain Medicine: <http://med.stanford.edu/paincenter.html>
- Twitter: <https://twitter.com/bethdarnall>
- Psychology Today: <https://www.psychologytoday.com/us/blog/empowered-relief>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Patient Centered Outcomes Research Institute PI: Darnall 2022-- 2027

Title: Comparative Effectiveness of Online Cognitive Behavioral Therapy vs. an Online Single-Session Pain Relief Skills Class ("Empowered Relief") for Chronic Pain

This is a 6-site national randomized comparative effectiveness trial conducted in 1,200 patients in mixed-etiology chronic pain.

NIH / NIDA K24 PI: Darnall 2021 -- 2026

Title: Research and Mentoring in Innovative Patient Oriented Pain and Opioid Science

This project involves a decentralized, fully online randomized controlled national trial of brief and digital behavioral treatment for chronic pain in people who have opioid misuse. The digital intervention being tested is a tailored version of "Empowered Relief."

Patient Centered Outcomes Research Institute PI: Darnall 2018 - 2023

Title: "Comparative Effectiveness of Pain Cognitive Behavioral Therapy and Chronic Pain Self-Management Within the Context of Opioid Reduction."

The EMPOWER study is a pragmatic 5-state RCT that is testing patient-centered and voluntary opioid tapering methods. We are comparing two evidence based group behavioral treatments to facilitate opioid and pain reduction. In total, we are studying 1,865 participants.

<https://empower.stanford.edu/>

NIH / NCCIH PIs: Darnall & Mackey 2015 – 2022 (NCE)

R01AT008561

Title: Single Session Pain Catastrophizing Treatment: Comparative Efficacy & Mechanisms

This project seeks to understand mechanisms of pain catastrophizing and optimize rapid delivery of targeted treatment. Primary trial results published in JAMA Network Open in 2021 (Darnall et al).

EMPOWERED RELIEF: The 2-hour, single-session behavioral medicine skills-based pain class ("Empowered Relief") is embedded into care pathways and health organizations nationally and internationally. "Empowered Relief" provides rapid access to evidence-based behavioral medicine at low cost -- up to 100 patients and family members have been treated in a single class. Open access results available in JAMA Network Open, Darnall et al, August 2021. We found non-inferiority for 2-hour "Empowered Relief" compared to 16 hours of cognitive behavioral therapy for chronic pain for reducing pain catastrophizing, pain intensity, pain interference, and a range of secondary outcomes including sleep disturbance, sleep bothersomeness, depression, fatigue, and anxiety at 3-month post-treatment. A follow-on randomized trial similarly showed multidimensional benefits for online-received "Empowered Relief" at 3 months post-treatment (open access; Ziadni et al, JMIR, Sept 2021). More than 350 clinicians are certified instructors, and "Empowered Relief" is delivered in 12 countries and in 6 languages. PCORI is funding a 6-site national comparative effectiveness trial of online "Empowered Relief" (2022-2027).

MY SURGICAL SUCCESS: "Empowered Relief" was adapted to perioperative patients and digitized to create an e-health intervention called "My Surgical Success" (MSS) that requires no therapist involvement. Our randomized controlled pilot of MSS in breast cancer surgery revealed that patients who engaged with MSS stopped post-operative opioids 6.5 days sooner than those assigned to the health education control intervention (see Darnall, Ziadni et al 2019 Pain Med). A follow-on study in orthopedic trauma surgery patients revealed promising results for sustained pain reduction 3 months after surgery relative to controls (in review).

VOLUNTARY OPIOID REDUCTION: Our PCORI-funded patient-centered research investigates safe and compassionate opioid de-prescribing (<https://empower.stanford.edu>) and investigation of behavioral medicine to optimize voluntary taper experience and response.

CLINICAL TRIALS

- Comparative Effectiveness of Online 8-session CBT vs. 1-Session Empowered Relief for Chronic Pain - The PROGRESS Study, Recruiting
- Single-Session "Empowered Relief" Class for Marfan Syndrome and Related Conditions, Recruiting
- Cognitive Behavioral Therapy and Chronic Pain Self-Management Within the Context of Opioid Reduction: The EMPOWER Study, Not Recruiting
- Digital Behavioral Pain Medicine for Orthopedic Trauma Surgery Patients, Not Recruiting
- My Surgical Success: A Randomized Controlled Pilot Study of a Pre-surgical Psychological Intervention, Not Recruiting
- Patient-Centered Opioid Tapering Study, Not Recruiting
- Recovery Toolkits: Assessment of Pragmatic Behavioral Pain Medicine Delivered In Hospital After Surgery, Not Recruiting
- Self-Administered Skills-Based Virtual Reality Intervention for Chronic Pain, Not Recruiting
- Single Session Pain Psychology Treatment: Comparative Efficacy & Mechanisms, Not Recruiting
- Stanford Center for Back Pain, Not Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Pain Management (Fellowship Program)

Publications

PUBLICATIONS

- **Prescription opioid tapering practices and outcomes at a rural VA health care system.** *Pain medicine (Malden, Mass.)*
Courtney, R. E., Halsey, E., Patil, T., Mastronardi, K. V., Browne, H. S., Darnall, B. D.
2024
- **Empowered Relief, cognitive behavioral therapy, and health education for people with chronic pain: a comparison of outcomes at 6-month Follow-up for a randomized controlled trial.** *Pain reports*
Darnall, B. D., Burns, J. W., Hong, J., Roy, A., Slater, K., Poupore-King, H., Ziadni, M. S., You, D. S., Jung, C., Cook, K. F., Lorig, K., Tian, L., Mackey, et al
2024; 9 (1): e1116
- **Innovative treatment formats, technologies, and clinician trainings that improve access to behavioral pain treatment for youth and adults.** *Frontiers in pain research (Lausanne, Switzerland)*
Darnall, B. D., Edwards, K. A., Courtney, R. E., Ziadni, M. S., Simons, L. E., Harrison, L. E.
2023; 4: 1223172
- **"My Surgical Success": Feasibility and Impact of a Single-Session Digital Behavioral Pain Medicine Intervention on Pain Intensity, Pain Catastrophizing, and Time to Opioid Cessation After Orthopedic Trauma Surgery-A Randomized Trial.** *Anesthesia and analgesia*
Ziadni, M. S., You, D. S., Keane, R., Salazar, B., Jaros, S., Ram, J., Roy, A., Tanner, N., Salmasi, V., Gardner, M., Darnall, B. D.
2022
- **Transforming Standard of Care for Spine Surgery: Integration of an Online Single-Session Behavioral Pain Management Class for Perioperative Optimization.** *Frontiers in pain research (Lausanne, Switzerland)*
Davin, S. A., Savage, J., Thompson, N. R., Schuster, A., Darnall, B. D.
2022; 3: 856252
- **Comparison of a Single-Session Pain Management Skills Intervention With a Single-Session Health Education Intervention and 8 Sessions of Cognitive Behavioral Therapy in Adults With Chronic Low Back Pain: A Randomized Clinical Trial.** *JAMA network open*
Darnall, B. D., Roy, A., Chen, A. L., Ziadni, M. S., Keane, R. T., You, D. S., Slater, K., Poupore-King, H., Mackey, I., Kao, M. C., Cook, K. F., Lorig, K., Zhang, et al
2021; 4 (8): e2113401
- **Clinical and neuroscience evidence supports the critical importance of patient expectations and agency in opioid tapering.** *Pain*
Darnall, B. D., Fields, H. L.
2021
- **Three-month follow-up results of a double-blind, randomized placebo-controlled trial of 8-week self-administered at-home behavioral skills-based virtual reality (VR) for chronic low back pain.** *The journal of pain*
Garcia, L. M., Birkhead, B. J., Krishnamurthy, P., Mackey, I., Sackman, J., Salmasi, V., Louis, R., Maddox, T., Darnall, B. D.
2021
- **Efficacy of a Single-Session "Empowered Relief" Zoom-Delivered Group Intervention for Chronic Pain: Randomized Controlled Trial Conducted During the COVID-19 Pandemic.** *Journal of medical Internet research*
Ziadni, M. S., Gonzalez-Castro, L., Anderson, S., Krishnamurthy, P., Darnall, B. D.
2021; 23 (9): e29672
- **"My Surgical Success": Effect of a Digital Behavioral Pain Medicine Intervention on Time to Opioid Cessation After Breast Cancer Surgery-A Pilot Randomized Controlled Clinical Trial** *PAIN MEDICINE*
Darnall, B. D., Ziadni, M. S., Krishnamurthy, P., Flood, P., Heathcote, L. C., Mackey, I. G., Taub, C., Wheeler, A.
2019; 20 (11): 2228-37
- **Patient-Centered Prescription Opioid Tapering in Community Outpatients With Chronic Pain.** *JAMA internal medicine*
Darnall, B. D., Ziadni, M. S., Stieg, R. L., Mackey, I. G., Kao, M. C., Flood, P.
2018; 178 (5): 707-708
- **To treat pain, study people in all their complexity.** *Nature*
Darnall, B. n.
2018; 557 (7703): 7

- **A digital health intervention to support patients with chronic pain during prescription opioid tapering: a pilot randomised controlled trial.** *Pain reports*
Gholamrezaei, A., Magee, M. R., McNeilage, A. G., Dwyer, L., Sim, A., Ferreira, M. L., Darnall, B. D., Brake, T., Aggarwal, A., Craigie, M., Hollington, I., Glare, P., Ashton-James, et al
2024; 9 (2): e1128
- **The Problem of Pain in Lupus: Epidemiological Profiles of Patients Attending Multidisciplinary Pain Clinics.** *Pain management nursing : official journal of the American Society of Pain Management Nurses*
Jiang, T. E., Pascual, A. P., Le, N., Nguyen, T. B., Mackey, S., Darnall, B. D., Simard, J. F., Falasinnu, T.
2024
- **Is there an association between lateralization of chronic pain in the body and depression?** *The journal of pain*
Edwards, K. A., Lii, T., Schouten, T. D., Kearney, K. M., Ziadni, M. S., Darnall, B. D., Mackey, S. C., Gilam, G.
2024
- **The Problem of Pain in Rheumatology: Variations in Case Definitions Derived From Chronic Pain Phenotyping Algorithms Using Electronic Health Records.** *The Journal of rheumatology*
Falasinnu, T., Nguyen, T., En Jiang, T., Tamang, S., Chaichian, Y., Darnall, B. D., Mackey, S., Simard, J. F., Chen, J. H.
2023
- **Establishing the interpretability and utility of the 4-item BriefPCS.** *Scientific reports*
You, D. S., Cook, K. F., Lannon, E. W., Ziadni, M. S., Darnall, B. D., Mackey, S. C.
2023; 13 (1): 21272
- **Pain in U.S. Corrections Settings: The Promise of Digital Solutions for Better Data and Treatment Access.** *Pain medicine (Malden, Mass.)*
Banerjee, A., Mackey, S. C., Vest, N., Darnall, B. D.
2023
- **Text messaging intervention to support patients with chronic pain during prescription opioid tapering: protocol for a double-blind randomised controlled trial.** *BMJ open*
Gholamrezaei, A., Magee, M. R., McNeilage, A. G., Dwyer, L., Jafari, H., Sim, A. M., Ferreira, M. L., Darnall, B. D., Glare, P., Ashton-James, C. E.
2023; 13 (10): e073297
- **Psychological Approaches for Migraine Management.** *Anesthesiology clinics*
Sturgeon, J. A., Ehde, D. M., Darnall, B. D., Barad, M. J., Clauw, D. J., Jensen, M. P.
2023; 41 (2): 341-355
- **Recommendations for the development, implementation, and reporting of control interventions in efficacy and mechanistic trials of physical, psychological, and self-management therapies: the CoPPS Statement.** *BMJ (Clinical research ed.)*
Hohenschurz-Schmidt, D., Vase, L., Scott, W., Annoni, M., Ajayi, O. K., Barth, J., Bennell, K., Berna, C., Bialosky, J., Braithwaite, F., Finnerup, N. B., Williams, A. m., Carlino, et al
2023; 381: e072108
- **Durable Chronic Low Back Pain Reductions to 24-Months Post-Treatment for An Accessible, 8-Week, In-Home Behavioral Skills-Based Virtual Reality Program: A Randomized Controlled Trial.** *Pain medicine (Malden, Mass.)*
Maddox, T., Sparks, C., Oldstone, L., Maddox, R., Ffrench, K., Garcia, H., Krishnamurthy, P., Okhotin, D., Garcia, L. M., Birkhead, B. J., Sackman, J., Mackey, I., Louis, et al
2023
- **A Longitudinal Investigation of the Impact of COVID-19 on Patients with Chronic Pain.** *The journal of pain*
Ziadni, M. S., Jaros, S., Anderson, S. R., You, D. S., Darnall, B. D., Mackey, S. C.
2023
- **A digital health intervention to support patients with chronic pain during prescription opioid tapering: a pilot randomised controlled trial.** *medRxiv : the preprint server for health sciences*
Gholamrezaei, A., Magee, M. R., McNeilage, A. G., Dwyer, L., Sim, A., Ferreira, M. L., Darnall, B. D., Brake, T., Aggarwal, A., Craigie, M., Hollington, I., Glare, P., Ashton-James, et al
2023
- **On the importance of baseline pain intensity and measurement methods.** *Pain*
Darnall, B. D.
2023

- **The Impact Of Single-Session Behavioral Pain Management Class On Next Day Pain Intensity And Opioid Use Among People With Chronic Pain Taking Prescribed Daily Opioids: A Daily Dairy Study**
Edwards, K., Dildine, T., Herrick, A., You, D. S., Darnall, B., Ziadni, M. S.
CHURCHILL LIVINGSTONE.2023: 96-97
- **Spontaneous self-affirmation: an adaptive coping strategy for people with chronic pain.** *Scandinavian journal of pain*
You, D. S., Hettie, G., Darnall, B. D., Ziadni, M. S.
2023
- **Self-reported physical function is strongly related to pain behavior and pain interference and weakly related to physical capacity in people with chronic low back pain.** *Musculoskeletal science & practice*
Karayannis, N. V., Smuck, M., Law, C., Mackey, S. C., Gross, J. J., Darnall, B. D., Hush, J.
2023: 102721
- **In-home virtual reality program for chronic low back pain: durability of a randomized, placebo-controlled clinical trial to 18 months post-treatment.** *Regional anesthesia and pain medicine*
Maddox, T., Garcia, H., Ffrench, K., Maddox, R., Garcia, L., Krishnamurthy, P., Okhotin, D., Sparks, C., Oldstone, L., Birkhead, B., Sackman, J., Mackey, I., Louis, et al
2022
- **A Digital Video and Text Messaging Intervention to Support People With Chronic Pain During Opioid Tapering: Content Development Using Co-design.** *JMIR formative research*
Magee, M. R., Gholamrezaei, A., McNeilage, A. G., Sim, A., Dwyer, L., Ferreira, M. L., Darnall, B. D., Glare, P., Ashton-James, C. E.
2022; 6 (11): e40507
- **Single-session interventions for pain** *PSYCHOLOGIST*
Darnall, B.
2022; 35: 38-41
- **Patient Responses to the Term Pain Catastrophizing: Thematic Analysis of Cross-sectional International Data.** *The journal of pain*
Webster, F., Connoy, L., Longo, R., Ahuja, D., Amtmann, D., Anderson, A., Ashton-James, C. E., Boyd, H., Chambers, C. T., Cook, K. F., Cowan, P., Crombez, G., Feinstein, et al
2022
- **Intensity of Chronic Low Back Pain and Activity Interference: A Daily Diary Study of the Moderating Role of Cognitive Pain Coping Strategies.** *Pain medicine (Malden, Mass.)*
Vertsberger, D., Talmon, A., Ziadni, M., Kong, J., Darnall, B. D., Manber, R., Mackey, S., Gross, J. J.
2022
- **Association of pain catastrophizing longitudinally with pain severity and interference in patients with chronic pain and cancer: A CHOIR study**
Azizoddin, D., Wilson, J., Mackey, S., Flowers, K., Darnall, B., Edwards, R., Schreiber, K. L.
LIPPINCOTT WILLIAMS & WILKINS.2022: 213
- **Mindfulness-Based Stress Reduction, Cognitive Behavioral Therapy, and Acupuncture in Chronic Low Back Pain: Protocol for Two Linked Randomized Controlled Trials.** *JMIR research protocols*
Mackey, S., Gilam, G., Darnall, B., Goldin, P., Kong, J., Law, C., Heirich, M., Karayannis, N., Kao, M., Tian, L., Manber, R., Gross, J.
2022; 11 (9): e37823
- **Agile development of a digital exposure treatment for youth with chronic musculoskeletal pain: protocol of a user-centred design approach and examination of feasibility and preliminary efficacy.** *BMJ open*
Harrison, L. E., Webster, S. N., Van Orden, A. R., Choate, E., Jehl, N., Stinson, J., Wicksell, R. K., Darnall, B. D., Simons, L. E.
2022; 12 (9): e065997
- **The Problem of Pain in Rheumatology: Clinical Profiles Associated with Concomitant Diagnoses with Chronic Overlapping Pain Conditions**
Falasinnu, T., Chaichian, Y., Simard, J.
WILEY.2022: 2392-2394
- **Increased pain catastrophizing longitudinally predicts worsened pain severity and interference in patients with chronic pain and cancer: A CHOIR study.** *Psycho-oncology*
Wilson, J. M., Schreiber, K. L., Mackey, S., Flowers, K. M., Darnall, B. D., Edwards, R. R., Azizoddin, D. R.
2022

- **The Problem of Pain in Rheumatology: Clinical Profiles Associated With Concomitant Diagnoses With Chronic Overlapping Pain Conditions.** *ACR open rheumatology*
Falasinnu, T., Nguyen, T., Jiang, T. E., Chaichian, Y., Rector, A., Darnall, B. D., Mackey, S., Simard, J. F.
2022
- **Correction: Durability of the Treatment Effects of an 8-Week Self-administered Home-Based Virtual Reality Program for Chronic Low Back Pain: 6-Month Follow-up Study of a Randomized Clinical Trial.** *Journal of medical Internet research*
Garcia, L., Birkhead, B., Krishnamurthy, P., Mackey, I., Sackman, J., Salmasi, V., Louis, R., Castro, C., Maddox, R., Maddox, T., Darnall, B. D.
2022; 24 (6): e40038
- **Durability of the Treatment Effects of an 8-Week Self-administered Home-Based Virtual Reality Program for Chronic Low Back Pain: 6-Month Follow-up Study of a Randomized Clinical Trial (vol 24, e37480, 2022)** *JOURNAL OF MEDICAL INTERNET RESEARCH*
Garcia, L., Birkhead, B., Krishnamurthy, P., Mackey, I., Sackman, J., Salmasi, V., Louis, R., Castro, C., Maddox, R., Maddox, T., Darnall, B. D.
2022; 24 (6)
- **Durability of the Treatment Effects of an 8-Week Self-administered Home-Based Virtual Reality Program for Chronic Low Back Pain: Follow-up Study of a Randomized Clinical Trial.** *Journal of medical Internet research*
Garcia, L., Birkhead, B., Krishnamurthy, P., Mackey, I., Sackman, J., Salmasi, V., Louis, R., Castro, C., Maddox, R., Maddox, T., Darnall, B. D.
2022; 24 (5): e37480
- **Optimal opioid treatment requires a consensual approach.** *Pain*
Fields, H. L., Darnall, B. D.
2022; 163 (5): e689-e690
- **Optimal opioid treatment requires a consensual approach.** *Pain*
Fields, H. L., Darnall, B. D.
2022; 163 (5): e689-e690
- **Evaluating acceptability and feasibility of a mobile health intervention to improve self-efficacy in prescription opioid tapering in patients with chronic pain: protocol for a pilot randomised, single-blind, controlled trial.** *BMJ open*
Magee, M., Gholamrezaei, A., McNeilage, A. G., Dwyer, L., Sim, A., Ferreira, M., Darnall, B., Glare, P., Ashton-James, C.
2022; 12 (4): e057174
- **The impact of COVID-19 on patients with chronic pain seeking care at a tertiary pain clinic.** *Scientific reports*
Ziadni, M. S., You, D. S., Cramer, E. M., Anderson, S. R., Hettie, G., Darnall, B. D., Mackey, S. C.
2022; 12 (1): 6435
- **Clarification of Conflict of Interest Disclosures.** *JAMA internal medicine*
Darnall, B. D.
2022
- **Features and methods to discriminate between mechanism-based categories of pain experienced in the musculoskeletal system: a Delphi expert consensus study.** *Pain*
Shraim, M. A., Sluka, K. A., Sterling, M., Arendt-Nielsen, L., Argoff, C., Bagraith, K. S., Baron, R., Brisby, H., Carr, D. B., Chimenti, R. L., Courtney, C. A., Curatolo, M., Darnall, et al
2022
- **Comparing Perceived Pain Impact Between Younger and Older Adults With High Impact Chronic Pain: A Cross-Sectional Qualitative and Quantitative Survey.** *Frontiers in pain research (Lausanne, Switzerland)*
You, D. S., Ziadni, M. S., Hettie, G., Darnall, B. D., Cook, K. F., Von Korff, M. R., Mackey, S. C.
2022; 3: 850713
- **Psychological Treatment for Chronic Pain: Improving Access and Integration.** *Psychological science in the public interest : a journal of the American Psychological Society*
Darnall, B. D.
2021; 22 (2): 45-51
- **Engagement in Prescription Opioid Tapering Research: the EMPOWER Study and a Coproduction Model of Success.** *Journal of general internal medicine*
Mardian, A., Perez, L., Pun, T., Cheung, M., Porter, J., De Bruyne, K., Kao, M., Flood, P., Moore, N., Colloca, L., Cramer, E., Ashton-James, C. E., Lorig, et al
2021

- **Lack of Premeditation Predicts Aberrant Behaviors Related to Prescription Opioids in Patients with Chronic Pain: A Cross-Sectional Study.** *Substance use & misuse*
Hettie, G., Nwaneshiudu, C., Ziadni, M. S., Darnall, B. D., Mackey, S. C., You, D. S.
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PRESENTATIONS

- 2020 NIH 15th Annual Pain Research Consortium Symposium (invited speaker, digital behavioral medicine) - National Institutes of Health (June 3, 2020)
- 2019 U.S. Food and Drug Administration (FDA), invited testimony on Patient-Centered Voluntary Opioid Tapering - U.S. Food and Drug Administration (6/11/2019)
- 2019 Keynote Speaker, Australian Pain Society: Brief and Digital Behavioral Pain Medicine Across the Continuum of Care: “Empowered Relief” and “My Surgical Success” - Keynote Speaker, Australian Pain Society
- 2018 Congressional Briefing on the Pain and Opioid Crisis (invited speaker; Washington DC) - Congress; October 2018
- 2018 World Economic Forum, Davos, Switzerland: "The Psychology of Pain Relief" - World Economic Forum (January 23, 2018)