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Education

- Postdoc 2021-present **University of North Carolina**, Chapel Hill, NC
Injury Prevention Research Center
Postdoctoral Research Fellow, Innovations in Suicide Prevention Research (INSPIRE)
PIs: Brian Pence & Shabbar Ranapurwala
- Postdoc 2018-2021 **University of North Carolina School of Medicine**, Chapel Hill, NC
Program on Integrative Medicine, Department of Physical Medicine and Rehabilitation
T32 Postdoctoral Fellow, National Institute of Complementary and Integrative Health
PIs: Susan Gaylord & J Douglas Mann
- PhD
2018 **University of North Carolina School of Public Health**, Chapel Hill, NC
Epidemiology
Advisors: Charles Poole & Gary Slade
Dissertation title: ***Pain-related disability among people with chronic orofacial pain***
- MPH
2009 **University of North Carolina School of Public Health**, Chapel Hill, NC
Public Health Leadership
Master's thesis: ***The role of age in temporomandibular disorder***
- BA
2002 **Antioch College**, Yellow Springs, OH
Bachelor of Arts in Self, Society and Culture
- Teaching Experience**
- 8/2018-present **Adjunct Professor**, Public Health Leadership Program, UNC Gillings School of Global Public Health
Course: Quantitative Methods for Healthcare Professionals
Course Description: Course is designed to meet the needs of health care professionals to appraise the design and analysis of medical and health care studies and who intend to pursue academic research careers. Covers basics of statistical inference, analysis of variance, multiple regression, categorical data analysis. 4 semesters, average enrollment: 60 students, 3 teaching assistants.
- Spring 2018 **Adjunct Instructor**, Pharmacotherapy and Experimental Therapeutics, UNC Eshelman School of Pharmacy
Course: Quantitative Methods in Clinical Research
Course Description: Course reviews statistical concepts and discusses the most used statistical methods for analysis of data from clinical studies or research experiments. Designed for pharmacy students in the practice of pharmacy and to train graduate and postgraduate scientists in principles of translational research. 1 semester, enrollment: 9 students
- Fall 2017 **Teaching Assistant, Clinical Evaluation and Measurement in Epidemiology**

Course Director: Sonia Napravnik napravs@med.unc.edu

Course Description: Broad-based introduction to the concepts and methods of epidemiology with particular emphasis on their application in clinical research, clinical practice, and health care policy (graduate level course).

Fall 2014

Teaching Assistant, Principals of Epidemiology for Public Health

Course Director: Victor Schoenbach vjs@unc.edu

Course Description: Introductory course to the basic concepts of epidemiology to multiple domains of public health.

Teaching training

- Center for Faculty Excellence Pedagogy Reading Circle (meets weekly to discuss inclusive teaching strategies)
- Equity in Teaching Institute, December 2020 Cohort
- The inclusive STEM Teaching project, 6-week online course on inclusive STEM teaching practices, offered via edx.org

Publications *denotes in preparation

***Miller V**, Pence B, Fitch K, Swilley-Martinez M, Agha E, Kavee A, Cooper T, Keil A, Gaynes B, Carey T, Ranapurwala S. Negative mental health outcomes and exposure to Hurricanes and flooding within the United States: systematic review. (in-preparation)

***Miller V**, Pence B, Fitch K, Swilley-Martinez M, Kavee A, Cooper T, Keil A, Gaynes B, Carey T, Ranapurwala S. The impact of COVID19 lockdown on suicide rates in North Carolina: an interrupted time series. (in-preparation)

Barnhill J, Roth I, **Miller V**, Baratta J, Chilcoat A, Kavalakatt B, Tiedt M, Thompson K, Gardiner P. (under review) Pilot data supports virtual Integrative Medical Group Visits for people with Long COVID.

Faurot K, Zamora D, **Miller V**, MacIntosh B, Horowitz M, Keyes G, Yuan Z, Lynch C, Honvoh G, Park J, Levy R, Domenichiello A, Johnston A, Barrow D, Palsson O, Gaylord S, Mann J. Effect of dietary n-3 and n-6 fatty acids on migraine-related co-occurring symptoms: secondary analysis of a randomized controlled trial. (under review)

Swilley-Martinez M, Coles S, **Miller V**, Alam I, Fitch K, Cruz T, Hohl B, Murray R, Ranapurwala S. "We adjusted for race" now what: A systematic review of operationalization and interpretation of race in *AJE* and *Epidemiology*, 2020-2021. (under review) submitted for the Special Issue 2023 issue (volume 45) on Race, Racism, and Disparities in Epidemiology of *Epidemiologic Reviews*

Miller V, Pence B, Fitch K, Swilley-Martinez M, Kavee A, Dorris S, Cooper T, Keil A, Gaynes B, Carey T, Ranapurwala S. Injury Prevention Published Online First: 13 December 2022. doi: 10.1136/ip-2022-044709.

Ranapurwala S, **Miller V**, Dorris S, Carey T, Gaynes B, Keil A, Fitch K, Goldston D, Kavee A, Swilley-Martinez M, Cooper T, Peiper L, Pence B. Innovations in Suicide Prevention Research (INSPIRE): Protocol for a population-based case-control study. Injury Prevention Published Online First: 14 June 2022. doi: 10.1136/injuryprev-2022-044609

Ramsden C, Zamora D, Faurot K, MacIntosh B, Horowitz M, Keyes G, Yuan Z, **Miller V**, Lynch C, Honvoh G, Park J, Levy R, Domenichiello A, Johnston A, Barrow D, Palsson O, Gaylord S, Mann J. (2021) Dietary alteration of n-3

and n-6 fatty acids for headache reduction in adults with episodic migraine: a randomized controlled trial. *BMJ*, vol 374. doi: <https://doi.org/10.1136/bmj.n1448>

Roth I, Tiedt M, Barnhill J, Karvelas K, Faurot K, Gaylord S, Gardiner P, **Miller V**, Leeman J. (2021) Feasibility of Implementation Mapping for Integrative Medical Group Visits. *Journal of Alternative and Complementary Medicine*, vol 27(S1): S71-S80. doi: 10.1089/acm.2020.0393. PMID: 33788606

Miller V, Faurot K, Palsson O, MacIntosh B, Suchindran C, Honvoh G, Gaylord S, Ramsden C, Mann. (2020) Comparing prospective headache diary and retrospective four-week headache questionnaire over 20 weeks: Secondary data analysis from a randomized controlled trial. *Cephalalgia*, vol 40(13):1523-1531. doi: 10.1177/0333102420949180. PMID: 32799667

Miller V, Chen D, Barrett D, Poole C, Golightly Y, Sanders A, Ohrbach R, Greenspan J, Fillingim R, Slade G. (2020) Understanding the relationship between features associated with pain-related disability in people with painful temporomandibular disorder (TMD): an exploratory structural equation modeling approach. *Pain*, vol 161(12):2710-2719. doi: 10.1097/j.pain.0000000000001976. PMID: 32639367

Miller V, Poole C, Golightly Y, Barrett D, Chen D, Ohrbach R, Greenspan J, Fillingim R, Slade G. (2019) Characteristics associated with high-impact pain in people with TMD: a cross-sectional study. *The Journal of Pain*, vol 20 (3): 288-300. doi: 10.1016/j.jpain.2018.09.007. PMID: 30292793

Chen H, Nackley A, **Miller V**, Diatchenko L, Maixner W. (2013) Multisystem dysregulation in people with temporomandibular disorders. *The Journal of Pain*, vol 14(9): 983-996.

Sanders AE, Essick GK, Fillingim R, Knott C, Ohrbach R, Greenspan JD, Diatchenko L, Maixner W, Dubner R, Bair E, **Miller VE**, Slade GD. (2013). Sleep apnea symptoms and risk of temporomandibular disorder: OPPERA Cohort. *Journal of Dental Research*, vol 92: S70- S77. PubMed PMID: 23690360.

Chen H, Slade G, Lim PF, **Miller V**, Maixner W, Diatchenko L. (2012). Relationship between temporomandibular disorders, widespread palpation tenderness, and multiple pain conditions: A case-control study, *The Journal of Pain*, vol 13(10): 1016-1027.

Miller, V (2012). Season variation in diet history interviews addressing only the past month, *American Clinical Journal of Nutrition*, vol 96(1): 219.

Sanders AE, Maixner W, Nackley A, Diatchenko L, By K, **Miller VE**, Slade G. (2011). Excess risk of temporomandibular disorder associated with cigarette smoking in young adults, *The Journal of Pain*, vol 13(1): 21-31.

Slade G, Bair E, By K, Mulkey F, Baraian C, Rothwell R, Reynolds M, **Miller V**, Gonzalez Y, Gordon S, Ribeiro-Dasilva M, Lim PF, Greenspan J, Dubner R, Fillingim RB, Diatchenko L, Maixner W, Dampier D, Knott C, Ohrbach R (2011). Study methods, recruitment, sociodemographic findings, and demographic representativeness in the OPPERA Study, *The Journal of Pain*, vol 12(11 supplement): T12-26.

Maixner W, Greenspan J, Dubner R, Bair E, Mulkey F, **Miller V**, Knott C, Slade G, Ohrbach R, Diatchenko L, Fillingim R. (2001). Potential autonomic risk factors for chronic TMD: Descriptive data and empirically identified domains from the OPPERA Case-Control Study, *The Journal of Pain*, vol 12(11 supplement): T75-T91.

Hollins M, Harper D, Gallagher S, Owings E, Lim PF, **Miller V**, Siddiqi M, Maixner W. (2009). Perceived intensity and unpleasantness of cutaneous and auditory stimuli: An evaluation of the generalized hypervigilance hypothesis, *Pain*, vol 141(3): 215-221.

Professional Experience

- 09/2017- 07/2018 **Odum Institute for Research in Social Science, University of North Carolina**, Chapel Hill, NC
Graduate Student Statistical consultant (walk-in consulting at the Research Hub)
- Responsibilities:** Provide consulting on appropriate statistical methods, application and interpretation of statistical approaches to a variety of research questions from students, staff and faculty at UNC. Utilize and share expertise in linear, logistic and structural equation modeling to support researchers using SAS, Stata, and Mplus.
- 09/2001-08/2011 **Center for Neurosensory Disorders, University of North Carolina**, Chapel Hill, NC
Research Specialist, Lead Clinical Research Coordinator
- Responsibilities:** Development and implementation of clinical research studies of chronic pain conditions including fibromyalgia, migraine, temporomandibular disorder, chronic pelvic pain, and others. Prepared and maintained all human subjects research approval and documentation for multiple studies including multi-site longitudinal cohorts. Performed standardized clinical evaluations and quantitative sensory testing, hired and supervised a team of research assistants and post-doctoral fellows involved in day-to-day data collection. Performed data analysis for manuscripts, presentations, and grant applications.
- Summer 2001 **National Institute of Environmental Health Sciences**, Research Triangle Park, NC
Research Assistant, Epidemiology

Research Support

- 2021-current **Innovations in Suicide Prevention Research (INSPIRE) 3R01MH124752**
National Institute of Mental Health
Program Investigators: Brian Pence and Shabbar Ranapurwala
- 2022-current **Characterizing Chronic Overlapping Pain Conditions among people with chronic low back pain, including effect of Mindfulness Based Stress Reduction delivered in a group and relation to social determinants of health 3UH3AT010621-04S1**
National Center for Complementary and Integrative Health
Program Investigator: Jessica Barnhill
- 2018-2021 **T-32 Postdoctoral Research Fellowship AT003378**
National Center for Complementary and Integrative Health
Program Directors: Susan Gaylord and Doug Mann
- 2011-2016 **Training grant support T90 DE021986**
NIH/NIDCR Training Program for the Next Generation of Oral Health Researchers (NextGen)
Program Director: Eric Everett
- 2008-2009 **US Public Health Service Traineeship**

Grant Applications

- 2022** ***funded*** CDC Injury Prevention and Control Research and State and Community Based Programs
Title “Risk and protective factors of Polydrug Overdose in North Carolina”
Role: Co-Investigator
PI: Shabbar Ranapurwala
- 2021** ***funded*** NINDS Supplement to HEAL OPTIMUM trial
Title “Characterizing Chronic Overlapping Pain Conditions among people with chronic low back pain, including effect of Mindfulness Based Stress Reduction delivered in a group and relation to social determinants of health.”
Role: Co-investigator
PI: Jessica Barnhill
- 2020** Sleep Innovation Research Grant
Title “Genetic factors influencing the relationship between sleep and pain”
Role: Principal Investigator
- 2012** Ruth L Kirschstein National Research Service Award for Individual Predoctoral Fellow (**F31**)
Title: “Relationship between Nutrition and Omega-3 Supplements on Orofacial Pain”
Role: Principal Investigator

Invited Manuscript Reviews

- 2013- The Journal of Pain
2013- Pharmacoepidemiology and Drug Safety
2014- Trials
2015- Complementary Therapies in Medicine
2019- British Journal of Nutrition
2019- Journal of Pain Research
2020- Evidence-Based Complementary and Alternative Medicine

Professional Honors/Awards

- 2019-2021 **NIH Loan Repayment Program award**
National Institute of Complementary and Integrative Medicine
- 2013 Clinical Research Award, 22nd Annual Meeting of the American Academy of Dental Sleep Medicine
2013 Clinical Excellence Award, 22nd Annual Meeting of the American Academy of Dental Sleep Medicine
2003 Best Scientific Poster, Society for Behavioral Medicine Meeting

Poster Presentations/Podium talks

- Miller V**, Pence B, Fitch K, Swilley-Martinez M, Kavee A, Cooper T, Gaynes B, Carey T, Goldston D, Ranapurwala S. Suicide mortality increased after lifting the stay-at-home order in North Carolina: an interrupted time series analysis. Presented at the Society for Epidemiologic Research Conference, November 9, 2022.
- Roth I, Barnhill J, **Miller V**, Chilcoat A, Tiedt M, Busby K, Gardiner P, Leeman J. Easing the Pain: Results of a pilot hybrid implementation-effectiveness study of Integrative Medical Group Visits for chronic pain. Presented at the 15th Annual Conference on the Science of Dissemination and Implementation in Health, Washington, DC, December 11-14, 2022.

- Miller V**, Ranapurwala S, Fitch K, Swilley-Martinez M, Kavee A, Dorris S, Keil A, Gaynes B, Carey T, Pence B. Did suicide rates increase in areas impacted by Hurricane Florence in North Carolina? A time series analysis, Society for Advancement of Violence and Injury Research Conference, Washington, DC March 30-April 1, 2022.
- Miller V**, Faurot K, Honvoh G, Palsson O, Gaylord S, Ramsden C, Mann D. Patterns of Headache, Trauma, and Comorbid Pain Among People with Migraine, International Association for the Study of Pain Virtual World Congress on Pain, virtual, June 2021.
- Roth I, Barnhill J, Gardiner P, Gaylord S, **Miller V**, Faurot K, Karvelas K, Leeman J, Tiedt. Implementing integrative medical group visits for patients with chronic pain: Approach and preliminary findings, Annual Meeting of the American Public Health Association, virtual, 2020.
- Miller V**, Chen DG, Barrett D, Ohrbach R, Slade G. Exploring the relationship between factors associated with pain-related disability in people with painful TMD: a structural equation modeling approach. Society for Epidemiologic Research Annual Meeting, Minneapolis, MN June 18-21 2019.
- Miller V**, Slade G, Ohrbach R, Poole C. Determinants of pain-related disability among people with chronic TMD: The OPPERA Study, 40th American Academy of Orofacial Pain Scientific Meeting, Lake Buena Vista, FL, 2016.
- Miller V**, Maixner W, Greenspan J, Fillingim R, Ohrbach R, Slade G. Selective Serotonin Reuptake Inhibitors (SSRIs) and experimental pain in healthy pain free participants: the OPPERA study, 33rd Annual Scientific Meeting of the American Pain Society, Tampa, FL, 2014.
- Essick G, Sanders A, **Miller V**, Slade G. Risk for obstructive sleep apnea and first-onset temporomandibular disorder, American Academy of Dental Sleep Medicine 22nd Annual Meeting, Baltimore, MD, 2013.
- Thieme K, **Miller V**. Pain inhibition in fibromyalgia, American Pain Society Annual Meeting, Austin, TX, 2011.
- Chen H, Slade G, Maixner W, **Miller V**, Diatchenko L. Widespread palpation tenderness is associated with multiple pain conditions in females with temporomandibular disorders, 30th Annual Scientific Meeting of the American Pain Society, Austin, TX, 2011.
- Miller VE**, Slade G, Diatchenko L, Maixner W. The role of age in TMD: A case-control study, International Association for the Study of Pain 13th World Congress on Pain, Montreal, Canada, 2010.
- Nackley A, Conrad M, Slade G, Smith S, Gibson D, Kasravi P, **Miller V**, Lim P, Maixner W, Diatchenko L. Cytokines associated with TMD case status and related intermediate phenotypes, 29th Annual Scientific Meeting of the American Pain Society, Baltimore, MD, 2010.
- Kasravi P, **Miller V**, Diatchenko L, Neely A, Smith S, Bair E, Maixner W. OPPERA: Pain Prospective Evaluation and Risk Assessment - A Study of Muscle, Joint and Jaw Function, Dental Research in Review, Chapel Hill, NC, 2009.
- Shad E, Siddiqi M, **Miller VE**, Gibson D, Lim PF, Arunasalam R, Kasravi P, Slade G, Neely A, Bair E, Maixner W, Diatchenko L. Candidate gene analysis of a persistent pain disorder, 12th World Congress on Pain, Glasgow, Scotland, 2008.
- Miller V**, Grewen K, Light KC. Men and Women in Better Partner Relationships Have Better Ambulatory Blood Pressure, Society for Behavioral Medicine Annual Meeting, 2003.
- Black M, Bragdon E, Light KC, Costello N, Brownley K, **Miller V**, Winfield J, Maixner W. Propranolol induces short-term reductions in clinical pain ratings in patients with fibromyalgia and temporomandibular disorder. 2002.