



On the Other Side of the Fence: A Busy Clinician Learning to Be a Researcher

Shamita Misra, MD; Jane A. McElroy, PhD; Michael C. Hosokawa, EdD

(Fam Med. 2019;51(5):440-2.)

doi: 10.22454/FamMed.2019.807462

As a good academic physician, I spent my days seeing patients, teaching medical students, and attending for residents. Over time, I also yearned to become a scholar like some of my physician colleagues. I wanted to do research, present, and publish something that would be of interest to others. I would never be an NIH-funded scholar, but I was hard working enough to delve into answering questions that came from seeing patients in a busy family medicine clinic.

During medical school and residency, I learned how to care for patients and teach medical students and residents, but I received little training in clinical research. I had to balance my academic life with my family time; these demands precluded me from adding formal coursework to my schedule.

Our department has a culture of collaboration and an appreciation for expertise of a diverse doctoral faculty. With some trepidation, I asked a colleague, epidemiologist Jane McElroy, PhD, to help me with a research idea and much to my relief she enthusiastically embraced it. As an attending physician, I am usually in the expert role. Dr McElroy became my attending and I would be on the other side of the fence as a learner.

I quickly learned that research takes time and perseverance. Jane and I met weekly to move my research idea from blackboard to

When Dr Misra approached me, it was clear that she was excited about figuring out if all the hoopla she had heard about yogic breathing exercises' positive effect on health had any validity. Similar to physicians, I am quite busy and I would have never pursued this topic. However, it is easy to say yes when a respected colleague would like help in an area that I love. For me, there is one criteria that moves an initial meeting from talk to walk—that is fire in the belly of the colleague. From my vantage point, collaboration did not mean I would take the idea and implement it, but rather that I would mentor someone in accomplishing the goal; ergo the need for fire in the belly. Week after week, Dr Misra showed up with a learner's hat on and rolled up her sleeves to put her idea into practice. At the end of the day, I wanted Dr Misra to own the project as hers or maybe ours, but definitely not mine.

— Jane McElroy

implementation. This felt a lot like preparing for a grand rounds seminar. During this time, we wrote a proposal for funding a small randomized controlled trial (RCT) based on published preliminary study results.^{1,2} After four grant proposal rejections, we received \$20,000 from the Center for Patient Centered Outcome Research (PCOR) at University of Missouri to fund our RCT called, "Take a Deep Breath." This money covered salary for a half-time research assistant, participant incentives, data analysis support, and video creation for patient education on breathing exercises.³ After receiving funding, my chair provided me a 6-month reduction of one half-day clinic contingent on deliverables that allowed for completion of the study. We submitted the manuscript of main results in the following 6 months.

I was learning the fine details of research, such as articulating a research hypothesis, developing a study design, identifying the appropriate survey tools, and describing an analytical plan. At the same time, I was teaching my mentor about the electronic medical record and clinical operation. I taught research staff how to properly obtain blood pressure measurements. We became a team.

As I grew in the project wearing my new researcher's hat, I had more questions. I wanted to ask busy clinicians what influenced them to participate in research. In research lingo, this would be called a qualitative study. I learned from my mentor that I could not be the one to ask my colleagues about their involvement for

From the Department of Family and Community Medicine, University of Missouri-Columbia.

fear of not getting honest answers. This straightforward research question and study design highlighted to me that doing research was exciting but really complicated. I felt novice again, like a medical student, and the new learning invigorated me.

so I think that made it appealing to physicians.

Providing some monetary or other incentive to study participants helps with enrollment and retention. Similarly, I wondered if paying

preferred not to get emails or updates on our study to avoid cluttering their already overflowing inboxes. However, they valued having a summary of the study results upon project completion.

My journey from clinician/educator to clinician/educator/researcher has been gratifying. Publishing study results,⁵⁻⁷ giving a talk at grand rounds, and presenting at the Society of Teachers in Family Medicine's 2018 Annual Spring Conference further motivated me to continue on this journey. However, in the current environment where physicians are measured for their productivity, I hope a metric is developed to credit clinicians who engage in all levels of research. With this system, my colleagues would be able to join me in feeling a sense of accomplishment and gratification. I love my family medicine department, where regardless of job title, we make time to share thoughts and support each other. I had crossed over the fence, learned from an outstanding mentor, and I now feel I am on the path to becoming a more rounded academic physician ready for the next research project with support from my department.

Who does the nitty gritty details of implementing a study? Who supervises the research staff? Dr Misra was in clinic for most of the week since she had limited reduction of clinical time; I was in the research suite. We split duties and I took on most of the administrative details by mentoring the research staff on project management. Dr Misra was at the clinic for up to 3 nights a week, after clinic hours working with research staff in obtaining blood pressure measurements and teaching the breathing exercise class, during the 6-week interventions for the 3 phases of the study. This division of duties felt right, as we were collaborators and we both expressed respect for each other's strengths. Neither of us took the other's effort for granted. As the mentor, it was quite rewarding to work with a smart, dedicated, and passionate physician.

– Jane McElroy

I did not want my research to interrupt my colleagues' workflow, yet I soon learned that physicians were willing to participate, provided their involvement was light. One physician remarked, "This is easy for me to do and if it helps out a colleague in their project then I'm happy to do it."

My relationship with my colleagues facilitated their engagement with my study. I, too, have assisted my colleagues with their studies while being sensitive to protecting my patients against unnecessary intrusions from research requests, especially projects that did not seem to have clinical relevance. I think all physicians have a strong desire to heal their patients. Beyond the Hippocratic oath of doing no harm, we also want to protect our patients. This extends to research projects. I am more careful in supporting a research study if I am not sure about its risk or value to my patients. As one physician said:

I think with hypertension, it is a medical issue we deal with very commonly and is poorly controlled for a lot of patients despite good medical management. I think you guys had a good research topic...

our physician colleagues for their involvement with the Take a Deep Breath Study study mattered. When we asked them about compensation, we heard a resounding, "not necessary, I did so little." Yet, if the burden of participation was extensive, they endorsed reducing clinical expectations as compensation to their participation.

From the perspective of a senior faculty leader and the department director of faculty development, it was obvious that something special was evolving. We had a physician faculty member willing to reach out, not for assistance, but in a learner role. From my perspective this was not a client-consultant, apprentice-master, mentor-mentee or student-teacher relationship. This model brought together two accomplished professionals, one with a clinical question and the other with skills to design a way to answer the question, but the relationship would be teacher-teacher. The physician would learn research design and the researcher would learn how to interact with the delivery of health care and the clinical milieu.

– Mike Hosokawa

Another aspect of research I learned was the importance of frequent communication with study team members. This process reminded me of our morning huddle,⁴ where we developed plans for the day. Our research huddle often took the form of emails. Did my physician colleagues want to be part of this research communication? They

PRESENTATIONS: The main results of the Take A Deep Breath study were presented at the 2018 STFM Annual Spring Conference:

Misra S, McElroy JA. Take a deep breath RCT study: effect of deep breathing exercises on blood pressure reduction. Presentation at Society of Teachers in Family Medicine Annual Spring Conference. Washington DC, May 5-9, 2018.

However, personal reflections that comprise this essay were not presented at the conference.

FINANCIAL SUPPORT: This study was partially supported by the Agency for Healthcare Research and Quality, grant number R24HS022140. Internal funding for clinician time was provided by the Department of Family and Community Medicine, University of Missouri-Columbia.

CORRESPONDING AUTHOR: Address correspondence to Dr Jane McElroy, MA306 Medical Science Building, 7 Hospital Drive, DC032.00, Family and Community Medicine Department, University of Missouri, Columbia, MO 65212. 573-882-4993. Fax: 573-884-6172. mcelroyja@missouri.edu.

References

1. McElroy JA, Misra S, Vasile M, Hosokawa MC. Take a deep breath: a pilot study demonstrating a significant reduction in blood pressure with 15 minute daily Pranayama breathing. *Ann Behav Sci Med Educ.* 2012;18(2):15-18.
2. Misra S, McElroy J, Hosokawa MC. Lessons from a successful collaboration between a researcher and clinician. *Fam Med.* 2013;45(5):357-358.
3. MizzouVideo. Breathing Instructions. <https://www.youtube.com/watch?v=2NiUp6oKUBM>. Published October 11, 2016. Accessed February 7, 2019.
4. Picciano A, Winter RO. Benefits of huddle implementation in the family medicine center. *Fam Med.* 2013;45(7):501-504.
5. Misra S, Smith J, Wareg N, Hodges K, Gandhi M, McElroy JA. Take a deep breath: A randomized control trial of Pranayama breathing on uncontrolled hypertension. *Adv Integr Med.* 2018. In Press.
6. Hodges K, Misra S, McElroy J. Stressed out by election results—take a deep breath. *J Yoga Physiother.* 2017;2(1).
7. Hodges KL, McElroy JA, Misra S. Changes in blood pressure after the 2016 United States presidential election. Analyses in response to “The association of posttraumatic stress disorder with clinic and ambulatory blood pressure in healthy adults” by Edmondson et al. *Psychosom Med.* 2018;80(6):588-589.