



CHIROPRACTIC (GENERAL)

## Chiropractic Research and You: What Would You Like to Know?

Dana Lawrence, DC, M. Med. Ed., MA; Christine Goertz, DC, PhD

One of the problems with having such a small research community within the chiropractic profession is that we are fairly limited in the number of research studies we are able to conduct. To put it in perspective, the Palmer Center for Chiropractic Research ([PCCR](#)) has approximately 30 full-time employees and spends about \$5 million per year. At any given time, we have around 12 studies in progress, not including those in the planning and development phase. Each project takes somewhere between 3-6 years to complete. Thus, the largest research effort in the U.S. is only able to tackle 1-3 new studies each year.

By now you are surely asking, how could that be possible? Well, there are many moving parts to a research project. Once you have a general question – for example, "Is the way you treat back pain better than the way a physical therapist or a family practice doctor might treat back pain?" – you have to figure out how to answer the question. This process is very complex.

To give you some idea, here is an example of one of the simplest kinds of studies out there – a survey. Let's say you want to survey a group of people about their attitudes regarding the chiropractic profession. What would it take to do this? The short answer: write a question or two, ask those questions to a few people and look at the results.



That's true, but let's also take a look at the long answer. Here are some of the issues you would have to grapple with before you could conduct the survey:

- What is the actual (very specific) research question you are asking? Many questions have to be

answered before you even know what to include in the survey. What do we mean by "attitudes"? How do you describe the chiropractic profession? Whose attitudes are you interested in measuring?

- How many questions do you need to ask our respondents in order to answer our research question?
- How should the questions be written?
- What kind of scale should you use to obtain answers: open-ended questions that give more specific data, but are hard to analyze ("Tell me about your previous experience with doctors of chiropractic."); or close-ended questions that force the respondent into set answers that might not be exactly relevant to their particular situation ("Please check the correct box: I have been to see a chiropractor five times or less, six times or more, never")?
- Is there previous published research on attitudes about chiropractic?
- Can you use that past research to help inform this project?
- Have you constructed good questions? (Are they free from leading answers? From sexist language? Do they take cultural sensitivities into account? Do they have a single stem with a single response possible? Are they grammatically correct?).
- Will you use a paper survey, collect data via telephone or go with something online, either email or web-based? If the former, how do you lay out and format the questions (something they don't teach you in graduate school)? If the latter, who will host the survey on the web? How will you get data from the online site to your statistical package?
- Have you pre-tested the survey? (You need to do this because other people may not interpret your questions the way you intended.)
- How do you decide who to survey? All U.S. citizens over the age of 18? Medicare beneficiaries? Former chiropractic patients? Once you decide who to survey, how do you find them? Do you have their phone numbers, email addresses, mail addresses? If not, how do you obtain that information? How much will it cost?
- How do you code the answers so you can enter them into a statistical analysis package?
- What kind of statistics are you going to use? Descriptive? Or something more complicated? Are you going to look at how people who answer one question respond to another? Regression analysis? [ANCOVA](#)?
- How will you record the data? Protect the data?
- When you have all your data, what is important to present from all the data we collected?
- How much will this survey cost to conduct? Who will provide the funding?
- How many scientists will it take to conduct the survey and how much of their time will be spent?
- Have you done due diligence in ensuring the protection of all human subjects involved in your research? (Translation: Have you submitted an application to an institutional review board - IRB - for its approval, as required by law? Have you arranged to obtain informed consent if deemed necessary by the IRB, as it usually is? Do you have all of the legally required elements present in your consent document? There are 13 of them.)

This is just a quick list off the tops of our heads. We know from previous experience that there are many other considerations that also need to be taken into account. And this is for a simple survey! Imagine the complexity of a clinical trial in which you have 200 people randomized to two groups: one of whom receives three adjustments for four weeks, while the other group receives some other intervention on a different treatment schedule.

And you are collecting pain and disability scores at each visit, and you are doing biomechanical testing once per week. And people will be coming in to the study over the course of six months, and you need to do baseline testing to see if they meet eligibility criteria, etc. It is a tremendous undertaking.

By now you may be wondering exactly what the point of this month's column might be. The point we are trying to make is that for every research question we ask, we are well-aware that there are so many more questions which need to be answered. Answering those questions takes money, time and energy, all of which are limited.

Given the exceedingly scarce research resources within the chiropractic research community, we want to make sure we are asking questions that provide you, the clinician, with information you are able to use as you engage in patient management. We want to help you better critically appraise articles, and to look critically at information as you decide whether or not you trust it enough to put it into use.

We are all working together to help our chiropractic patients receive the best care possible. And what we (the collective "we") want to know, for any paper, is whether or not that information can be applied to patient care.

So, we implore you: Contact us [see blog address below]. Let us know what research you are interested in and what your scientific concerns or questions are. We can help you better understand how to approach your question, find answers, and in the end, apply it to your patients. We look forward to hearing from you.

---

To learn more about Drs. Lawrence and Goertz, visit their columnist page. The column includes an [affiliated blog](#) where chiropractors can post questions for the authors.

FEBRUARY 2015