A Buddy System for Chiropractic Research

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Introduction

The recent awakening of chiropractic interest in serious clinical experimentation is leading an ever greater number of DCs and students to ask "Where to begin?" The answers to this question are several. Training in clinical research methods is essential, including didactic instruction in statistics (biometry) and experimental design, and supervised practical experience in conducting clinical studies [1, 2]. Other tactics are less fundamental, including a variety of strategies for motivating and organizing for research activity[3–6].

Organizing for research in chiropractic can occur on the micro- as well as the macro-level (e.g., national organizations such as the schools, FCER, ACA, ICA). This paper suggests the value of pairing up for the conduct of clinical studies. A buddy system for chiropractic research has the advantage of keeping responsibility for chiropractic science close to its source (i.e., the individual DC)[7], while permitting maximum organizational flexibility, shared duties in research projects, mutual reinforcement for scientific efforts, and practical improvements in the quality of clinical, academic, and training contexts (e.g., the solo or group practice, student clinic, or industrial settings).

Locus of Responsibility

C.O. Watkins, DC said it most simply and succinctly: "the science of chiropractic is the responsibility of chiropractors"[3]. Each DC is responsible for the science and art of chiropractic, and may contribute to meeting this responsibility in many ways, including financial support of research, developing research skills, staying current with chiropractic science knowledge (e.g., JMPT, JCCA), and volunteering as subject (*S*) or worker in chiropractic studies. However, the most significant manner by which any DC can meet this scientific responsibility is through the contribution of rigorous clinical data to the common pool of knowledge: the chiropractic and related health sciences literature.

The buddy system allows for sharing of mutual responsibilities within the context of clinical investigations. Chiropractic "research buddies" might divide responsibilities for some activities, such as equipment maintenance, recruitment of *S*s, data analysis, and sections of the final report. In other areas the availability of two clinicians could enhance the quality of data through combined efforts.

A buddy system for chiropractic research would help to prevent diffusion of responsibility for the clinical science of chiropractic. The two-person research team does not allow either partner to leave the obligation for research to an amorphous other (e.g., the rest of the profession), and may avoid the bureaucratic inflexibility and red tape which can impede the research efforts of larger groups. Although tasks may be divided between buddies, the overall project remains a personal enterprise.

Mutual Reinforcement

Clinical research can be a tedious process, one which requires persistence and sacrifice by investigators. Such efforts have been uncommon in chiropractic, and the potential research contexts for chiropractors (e.g., the colleges) have often ignored and sometimes obstructed serious research efforts[8]. Chiropractic scientist-practitioners have often had to persevere in their studies in relative isolation, without the social supports and encouragements available to other health researchers.

A buddy system provides the opportunity for researchers to maintain and encourage the motivation for clinical studies. Paired investigators might be expected to share journal articles, clinical hunches, hypotheses and observations, successes and failures. In this fashion they would create social support systems which reinforce on-going activities, and would stimulate further practical and theoretical development. Additionally, by permitting the costs of research to be shared, a buddy system may decrease financial disincentives for research.

Better Quality Data:

A chiropractic buddy system for research has the potential for improving the quality of clinical research data. By collecting paired, blinded clinical measurements, for example, within a clinical trial or a measurement evaluation study, the inter-observer reliability of clinical findings can be evaluated. For example, if two chiropractors repeatedly measured cervical ranges of motion before and after adjustive intervention, and before, during, and after treatment of a single *S* with cervical pain and restricted motion, the effects of chiropractic care for patients with cervical pain and dysfunction[9,10] might be more clearly appreciated. Graphic presentation of paired, blinded observations throughout the clinical trial could permit visual and statistical evaluation of inter-examiner reliability of measurement, and thereby enhance the quality of available data concerning chiropractic care for cervical syndromes (see Figure 1).

The Buddy System for Whom?

The simplicity of the two-person research organization gives it utility in a variety of contexts. Buddies might be two solo practitioners or two associate doctors who team up for selected cases. The solo doctor in an isolated area might team up with a chiropractic assistant. Clinical faculty might pair off among themselves, with other faculty, or with the interns they supervise.

A buddy system is an ideal strategy for pairs of students and interns. Preclinical students could gain early experience in clinical measurements by collaborating with interns who need blinded second observers, assistance with literature scans, and a sounding board for ideas. Each would benefit from development

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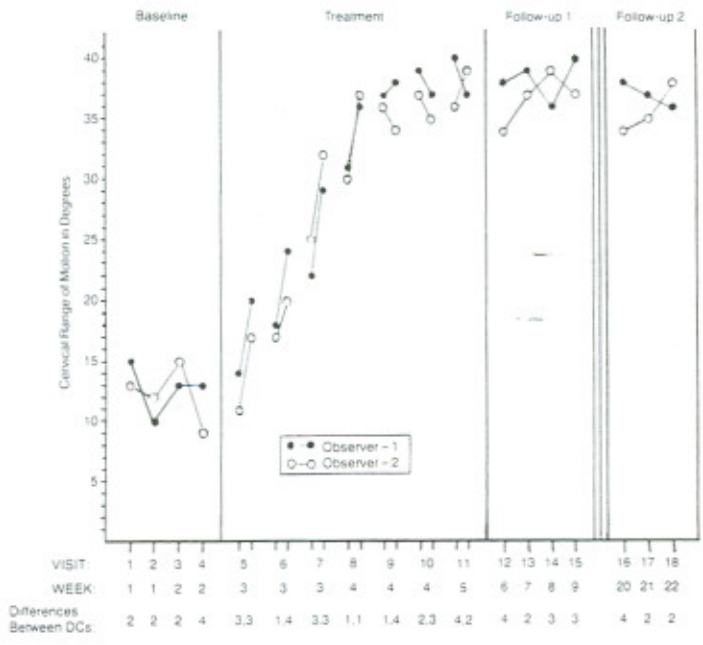
Figure 1



Hypothetical data illustrating paired goniometric measurements during Baseline (pre-treatment), Treatment (adjustive care), Follow-up 1 (short-term), and Follow-up 2 (long-term) phases. During the treatment phase the patient is measured twice by each DC at each clinic visit, that is, before and after adjustment. The mean differences between doctors during each phase of the study are: 2.5 (baseline), 2.5 (treatment), 3.0 (first follow-up), and 2.7 (second follow-up), and the ranges of differences throughout the trial is 1 to 4 degrees. Since the amount of change from baseline to follow-up phases is more than 20 degrees, the measurement of clinical improvement in this imaginary patient seems sufficiently reliable to detect therapeutic change.

of critical attitudes towards practice early in the training period. Relatedly, the community-based externship may encourage research partnerships between senior students and field practitioners.

Interdisciplinary pairs of chiropractic investigators also seem promising. Chiropractors could seek out those with complementary skills and interest, for example, epidemiologists, psychologists, or public health specialists. Similarly, the development of university and hospital-based training for chiropractic students could permit collaborative research relationships with a variety of other health-care practitioners and scientists. Clearly, a buddy system could be viable for many chiropractic researchers in a variety of settings.

Conclusions

Although Watkins[11] argued that clinical research is fundamental to chiropractic practice, engaging in research is still a step into the unkown for most DCs. A buddy system provides a type of buffer, and may stimulate and reinforce collaborative research efforts. Paired research planning and conduct facilitates learning, and may improve the quality of clinical data. By sharing costs and duties, the burdens of research may be lessened, and productivity increased. A buddy system for chiropractic research could help the DC to take responsibility in a very personal way for the science and art of chiropractic.

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