

The Chiropractor's Role in Public Health

LATEST ISSUE OF *JMPT* EXAMINES THE ROLE CHIROPRACTIC CAN - AND SHOULD - PLAY IN PROMOTING GLOBAL HEALTH.

Editorial Staff

Is there a connection between chiropractic and public health? According to Claire Johnson, MEd, DC, editor of the *Journal of Manipulative and Physiological Therapeutics (JMPT)*, which dedicated its July/August 2008 issue to public health, there is both a connection and an opportunity:

"Although some people associate 'public health' with bacteria, sewage and potable water, it is best defined as 'a society's efforts to protect, promote and restore health.' There has been a movement developing in the chiropractic profession that provides opportunities for more chiropractors to become more involved with public health activities, as this issue of the *JMPT* demonstrates.

"Chiropractic's involvement in public health began primarily in the 1980s. Since that time, our activity has grown, but we have not reached our potential. In order for the chiropractic profession to be effective, we need to become more involved in community health-related activities. Effective participation needs to go beyond focusing on our individual patients and practices; we must also assist our communities with health and wellness through active community participation, policy development, and health promotion. The future of chiropractic in public health depends on the participation of each one of us."

The July/August issue of *JMPT* features a variety of articles devoted to the topic of public health as it relates to the chiropractic profession. Dr. Johnson is co-author of the lead article, "Chiropractic and Public Health: Current State and Future Vision," along with a distinguished list of chiropractors including Dr. Rand Baird, chair of the WFC Public Health Committee; Dr. Bart Green, who serves in the Chiropractic Division, Department of Physical and Occupational Therapy at the Naval Medical Center in San Diego; Dr. Anthony Lisi, director of chiropractic services for the Veterans Administration; and Dr. Monica Smith, associate professor at the Palmer Center for Chiropractic Research. Here are some of the highlights of this important issue, presented in abstract form.

Adherence to Radiography Guidelines for Low Back Pain: A Survey of Chiropractic Schools Worldwide
Carlo Ammendolia, DC, PhD, John A.M. Taylor, DC, Victoria Pennick, RN, MHSc, Pierre Côté, DC, PhD,
Sheilah Hogg-Johnson, PhD, and Claire Bombardier, MD

Objective: This study describes instruction provided at chiropractic schools worldwide on the use of spine radiography and compares instruction with evidence-based guidelines for low back pain.

Methods: Individuals responsible for radiology instruction at accredited chiropractic schools throughout the world were contacted and invited to participate in a Web-based survey. The survey included questions on the role of conventional radiography in chiropractic practice and instruction given to students for its use in patients with acute low back pain.

Results: Of the 33 chiropractic schools identified worldwide, 32 (97%) participated in the survey. Consistent with the guidelines, 25 (78%) respondents disagreed that "routine radiography should be used prior to spinal manipulative therapy," 29 (91%) disagreed that there "was a role for full spine radiography for assessing patients with low back pain," and 29 (91%) disagreed that "oblique views should be part of a standard radiographic series for low back pain." However, only 14 (44%) respondents concurred with the guidelines and disagreed with the statement that there "is a role for radiography in acute low back pain in the absence of 'red flags' for serious disease."

Conclusions: This survey suggests that many aspects of radiology instruction provided by accredited chiropractic schools appear to be evidence based. However, there appears to be a disparity between some schools and existing evidence with respect to the role of radiography for patients with acute low back pain without "red flags" for serious disease. This may contribute to chiropractic overutilization of radiography for low back pain.

Adverse Effects of Spinal Manipulative Therapy in Children Younger Than Three Years: A
Retrospective Study in a Chiropractic Teaching Clinic
Joyce E. Miller, DC, and Kate Benfield, MChiro

Objective: The purpose of this study is to identify any adverse effects to chiropractic care occurring in the pediatric patient and to evaluate the risk of complications arising in the pediatric patient resulting from chiropractic care.

Methods: A three-year retrospective study of pediatric case files from the Anglo-European College of Chiropractic (AECC) teaching clinic practice in Bournemouth, England. All files (n = 781) of pediatric patients younger than 3 years of age were selected manually in sequential order from current files stored in the AECC clinic presenting to the C clinic during a specific period. Most (73.5%) patients presenting were 12 weeks of age or younger (n = 574).

Results: Six hundred ninety-seven children received a total of 5,242 chiropractic treatments, with 85% of parents reporting an improvement. Seven parents reported an adverse effect. There was a reaction rate of approximately one child in 100, or one reaction reported for every 749 treatments. There were no serious complications resulting from chiropractic treatment (reactions lasting 24 hours or severe enough to require hospital care).

Conclusion: This study shows that for the population studied, chiropractic manipulation produced very few adverse effects and was a safe form of therapy in the treatment of patients in this age group.

Nutrition and Youth Soccer for Childhood Overweight: A Pilot Novel Chiropractic Health Education
Intervention

Robert A. Leach, DC, MS, and Joyce M. Yates, EdD

Objective: The purpose of this pilot novel chiropractic health education intervention was to gather preliminary evidence regarding possible benefits from recreational youth soccer and nutrition education in overweight women. A secondary purpose was to determine whether some nutrition knowledge is an independent predictor of changes in body mass index (BMI).

Methods: A quiz developed and validated on separate age- and sex-appropriate blinded cohorts was

used on study participants - 22 volunteers of 57 eligible fourth-grade, overweight female Mississippi public school students. At the beginning of a five-month study period, a 15-minute baseline nutrition intervention, grounded in Social Cognitive Theory and based on the United States Department of Agriculture's "My Tips for Families" information, was applied in a chiropractic clinic. Subjects were then randomized to two months of recreational soccer (n = 14) or waiting list control (n = 8).

Results: No pre-intervention differences were found in height, weight, BMI, or age. Higher follow-up BMI scores were found in both groups, and no significant differences between groups were found, possibly because of the small sample sizes and the short eight-week soccer intervention period. Gains in nutrition knowledge were sustained ($P < .002$); however, there was no association between nutrition knowledge and follow-up BMI ($r = -.185$; $P < .462$).

Conclusions: Minimal nutrition education alone may be an ineffective intervention for overweight children. The study provides an example of how youth soccer may benefit overweight children.

Is It Time for a Population Health Approach to Neck Pain?
J. David Cassidy, DC, PhD, DrMedSc, and Pierre Côté, DC, PhD

Objective: Neck pain and its associated disorders (NPAD) cause significant health burden in the general population and after road traffic and occupational injury. Individual-level health care treatments have been well studied, but population health approaches to this problem have not. We used a best-evidence synthesis to examine population-level approaches to the prevention and control of NPAD.

Methods: The systematic review examined studies published between 1980 and 2006 that addressed the incidence, prevalence, risk factors, prevention, cost, assessment and classification, interventions, and course and prognostic factors for NPAD. Citations were screened for relevance, scientifically reviewed, and synthesized. Valid studies addressing public policies or population-level approaches to the prevention and control of NPAD were identified and used in the evidence synthesis.

Results: Only eight of the 552 scientifically admissible studies were considered relevant to a public or population health approach to preventing and controlling the burden of NPAD. For whiplash-associated disorders, active head restraints and seat backs were protective in rear-end collisions; insurance policies affected the incidence and recovery; government funding of multidisciplinary rehabilitation programs did not benefit recovery; and early intensive health care delayed recovery. In the workplace, two randomized trials failed to show any preventive effect for ergonomic interventions or physical training and stress management. One study documented the societal cost of neck pain.

Conclusions: There is little evidence on which to make public or population-level recommendations, despite the important public health burden and costs of NPAD. Population-level approaches to preventing and controlling NPAD should be investigated.

Chiropractic Treatment of Pregnancy-Related Low Back Pain: A Systematic Review of the Evidence
Kent J. Stuber, DC, MSc, and Dean L. Smith, DC, PhD

Objective: This study systematically reviewed the published evidence regarding chiropractic care, including spinal manipulation, for pregnancy-related low back pain (LBP).

Methods: A multimodal search strategy was conducted, including multiple database searches along with reference and journal hand searching. Studies were limited to those published in English in a peer-reviewed journal or conference proceeding between January 1982 and July 2007. All study designs were considered except single case reports, personal narratives, and qualitative designs. Retrieved articles that met the inclusion criteria were rated for quality by using a validated and reliable checklist.

Results: Six studies met the review's inclusion criteria in the form of one quasi-experimental single-group pretest-posttest design, four case series, and one cross-sectional case series study; their quality scores ranged from 5 to 14 out of 27. All of the included studies reported positive results for chiropractic care of LBP during pregnancy. Outcome measure use between the studies was inconsistent as were descriptions of patients, treatments, and treatment schedules.

Conclusions: Results from the six included studies showed that chiropractic care is associated with improved outcomes in pregnancy-related LBP. However, the low-to-moderate quality of evidence of the included studies precludes any definitive statement as to the efficacy of such care because all studies lacked both randomization and control groups. Given the relatively common use of chiropractic care during pregnancy, there is need for higher quality observational studies and controlled trials to determine efficacy.

Ontario Chiropractors' Knowledge, Attitudes and Beliefs About Intimate Partner Violence Among Their Patients: A Cross-Sectional Survey

Heather M. Shearer, DC, and Mohit Bhandari, MD

Objective: This study assessed chiropractors' attitudes, beliefs, knowledge, and experience about intimate partner violence (IPV) and identified if any differences exist between age groups, sex, and year of graduation of respondents.

Methods: Five hundred five Ontario chiropractors were sampled from the Canadian Chiropractic Association membership using a randomization program. This study used a cross-sectional survey. The sample was mailed an introductory postcard and three subsequent Provider Surveys, demographic forms, and information letters depending on nonresponse. The data were analyzed using descriptive statistics, Kruskal-Wallis analyses of variance and Mann-Whitney U tests.

Results: A response rate of 61% was attained. Of the respondents, 88% reported that IPV was rare or very rare in their practice. Significant sex differences were identified. Female respondents were almost twice as likely to strongly disagree with victim-blaming statements and were almost twice as concerned for their safety as male chiropractors when broaching the topic with batterers. Older practitioners were significantly more likely to inquire about IPV, depending on symptoms, blame victims, have less fear of offending victims, and have fewer safety concerns. Earlier graduates were significantly more likely to inquire about IPV depending on clinical presentation, but were also more likely to blame victims.

Conclusions: Ontario chiropractors have very little experience identifying IPV. Chiropractors would benefit from educational programs that would enable them to better identify and manage patients experiencing IPV. Sex, age, and experience were important modifiers in Ontario chiropractors' perceptions and behaviors regarding IPV among their patients.

Adverse Events Following Chiropractic Care for Subjects With Neck or Low-Back Pain: Do the Benefits
Outweigh the Risks?

Sidney M. Rubinstein, DC, PhD

This synopsis provides an overview of the benign and serious risks associated with chiropractic care for subjects with neck or low-back pain. Most adverse events associated with spinal manipulation are benign and self-limiting. The incidence of severe complications following chiropractic care and manipulation is extremely low. The best evidence suggests that chiropractic care is a useful therapy for subjects with neck or low-back pain for which the risks of serious adverse events should be considered negligible.

Qualitative Methods in Chiropractic Research: One Framework for Future Inquiry

Jon Adams, PhD, Alex Broom, PhD, and Megan Jennaway, PhD

Qualitative research holds potential for helping understand core aspects of chiropractic. Nevertheless, these methods remain underused in the field. This article overviews a qualitative perspective, introduces qualitative methods, and offers one possible framework to develop chiropractic research.

Complete contents of the July/August 2008 issue of *JMPT* are available online at www.mosby.com/jmpt.

SEPTEMBER 2008