



## Prevalence and profile of Australian chiropractors treating athletes or sports people: A cross-sectional study



Jon Adams<sup>a,\*</sup>, Romy Lauche<sup>a</sup>, Katie de Luca<sup>b</sup>, Michael Swain<sup>c</sup>, Wenbo Peng<sup>a</sup>, David Sibbritt<sup>a</sup>

<sup>a</sup> Australian Research Centre in Complementary and Integrative Medicine (ARCCIM), Faculty of Health, University of Technology Sydney, Sydney, NSW, Australia

<sup>b</sup> Private Practice, South West Rocks, Sydney, NSW, Australia

<sup>c</sup> Department of Chiropractic, Faculty of Science and Engineering, Macquarie University, Sydney, NSW, Australia

### ARTICLE INFO

#### Keywords:

Chiropractic  
Sports medicine  
Exercise  
Survey

### ABSTRACT

**Objectives:** A range of health-care professionals including chiropractors provide treatment for sports-related health problems. This study reports analyses from the first national workforce survey to determine practitioner and practice-related factors associated with the frequent treatment of athletes or sports people by Australian chiropractors.

**Design and setting:** A 21-item questionnaire collecting information pertaining to practitioner and practice-related characteristics was distributed to all Australian registered chiropractors, as part of the Australian Chiropractic Research Network (ACORN) project and attracted a response rate of 43% (n = 2005). Statistical analyses compared the frequency of treating athletes or sports people against a wide range of relevant practitioner and practice characteristics.

**Results:** Of the respondents, 49.5% (n = 936) reported frequently treating athletes or sports people, and these chiropractors were more likely to be male as well as report more patient care hours and patient visits per week than those chiropractors who did not frequently treat athletes or sports people. Chiropractors who frequently treat athletes or sports people were also more likely to perform multi-modal management, have multi-disciplinary practitioner relations, use diagnostic equipment and discuss nutrition and medication use as part of their patient care than those chiropractors who did not frequently treat athletes or sports people.

**Conclusions:** Nearly half of participating Australian chiropractors treat athletes or sports people frequently. The current and potential role of chiropractors in sports medicine appears significant. Further research is needed to examine the role, practices and outcomes of such chiropractic care helping to, provide treatment and policy development in this area of clinical management.

### 1. Introduction

Sports injuries pose a substantial health burden<sup>1,2</sup> and constitute a common cause of pain and disability that can negatively impact an individual's quality of life and well-being. It is estimated that 24% of all those experiencing a sport or exercise related injury are affected by a long-term condition; a figure similar to the global prevalence of back-related injuries.<sup>3</sup> Sports injuries also pose a significant monetary burden<sup>4,5</sup> with emergency-related costs and direct hospital-related expenses of sports injuries in Australia recently estimated to be \$2 billion per annum<sup>3</sup> – a conservative cost estimate that excludes treatment delivered in primary care settings, as well as other direct or indirect costs, such as loss of productivity.

A wide range of health care professionals, including sports

physicians, physiotherapists, exercise physiologists, chiropractors, osteopaths, sports trainers and massage therapists provide sports injury management and treat athletes or sports people. In the discipline of chiropractic, a 2012 Australian workforce study reported that 12.5% of patient visits were specifically for sports injuries.<sup>6</sup> A population level study of 2529 Canadian chiropractors (response rate 39%) found that sports injuries were the main focus of practice activity for 28% of Canadian chiropractors and that those who focused on rehabilitation and sports injuries also reported more referrals from medical doctors.<sup>7</sup> At the 2009 World Games, chiropractors recorded 1514 treatments with a utilisation rate of 15.31% for athletes<sup>8</sup> and this utilisation rate increased to 18.1% at the 2013 World Games.<sup>9</sup> However, there is scant research reporting the clinical characteristics of those chiropractors managing athletes or sports people, with the body of knowledge

\* Corresponding author at: Australian Research Centre in Complementary and Integrative Medicine (ARCCIM), Faculty of Health, Level 8, Building 10, University of Technology Sydney, 235-253 Jones St, Sydney, NSW, 2007, Australia.

E-mail address: [Jon.Adams@uts.edu.au](mailto:Jon.Adams@uts.edu.au) (J. Adams).

<https://doi.org/10.1016/j.ctim.2018.05.003>

Received 8 January 2018; Received in revised form 9 May 2018; Accepted 14 May 2018

Available online 22 May 2018

0965-2299/ © 2018 Published by Elsevier Ltd.

primarily consisting of sporting event surveillance designs.<sup>8–10</sup>

Sports chiropractic has attracted formal specialisation status in the US and Canada.<sup>11,12</sup> In Australia, chiropractors with a special interest in sports chiropractic can undertake relevant postgraduate programs via the International Federation of Sports Chiropractic. Meanwhile, Sports Chiropractic Australia is a national interest group for sports chiropractors coordinating volunteer care at community, state and national level sporting events.<sup>13</sup> Despite these circumstances, there is no set of standards, no code of practice, and no tiered specialisation for Australian sports chiropractors.<sup>14</sup> As such, there remains a lack of basic empirical data on the practice of sports chiropractic in Australia.

In direct response to this research gap, this paper reports the prevalence of treatment of athletes or sports people from a large, nationally-representative practice-based research network (PBRN) – the Australian Chiropractic Research Network (ACORN) – as well as examining the relationship between the socio-demographic and clinical characteristics of Australian chiropractors and the frequency with which they treat athletes or sports people. Recognising the prevalence and characteristics of Australian chiropractors treating athletes or sports people may help understand the burden of athletes/sports-related diseases, identify the range of chiropractic approaches used by athletes or sports people, and inform health care policy regarding the provision of such health services.

## 2. Methods

This paper reports analyses from a questionnaire distributed as part of the recruitment for the ACORN project – a voluntary national PBRN independently designed and conducted by senior researchers at the Australian Research Centre in Complementary and Integrative Medicine, Faculty of Health, University of Technology Sydney. Nine research teams have submitted Expression of Interest to the ACORN Steering Committee from across Australia and overseas and five have completed their sub-studies of the ACORN PBRN. As part of the recruitment for the ACORN PBRN a 21-item practitioner questionnaire was distributed to all registered chiropractors across Australia<sup>15</sup> following ethical approval from the Human Research Ethics Committee of the University of Technology Sydney (#2014000027).

### 2.1. Recruitment and sample

Recruitment for the ACORN PBRN was conducted between March and July 2015, and an invitation pack was distributed to all registered chiropractors via both professional associations and a profession-wide mail out and email campaign. The invitation pack was also distributed via a number of regional chiropractic-related conferences and events as well as available online through the ACORN website<sup>16</sup> during the recruitment period. All participants were given the opportunity to complete the practitioner questionnaire online (SurveyGizmo™) or via hard copy. A series of reminders were distributed following initial invitation pack distribution via the same recruitment channels. Further details regarding the ACORN PBRN recruitment and promotion strategies can be found elsewhere.<sup>17</sup>

A total of 2005 chiropractors completed the questionnaire (43% response rate) from 4684 registered chiropractors in Australia at the time of recruitment. Compared to the total population of chiropractors as registered by Australian Health Practitioner Regulation Agency (AHPRA) in March 2015<sup>18</sup> the respondents have been found to be representative regarding a number of key indicators: age; gender; and practice location with the distribution of practice location amongst the ACORN workforce sample just slightly over-represented by chiropractors from South Australia, the Australian Capital Territory, Tasmania and the Northern Territory.<sup>17</sup>

### 2.2. Instruments

Validity of the practitioner questionnaire items were assessed via pilot testing with a number of registered chiropractors who completed the survey and provided feedback on all aspects of the questionnaire regarding the topics included, wording, formatting, and broader issues around ease and duration of completion.<sup>17</sup> The questionnaire (see Supplementary material) collected information regarding: chiropractors' characteristics such as age, gender, education, professional qualifications and memberships in professional associations, years in private practice and professional roles in education, research and other professional areas; practice characteristics including average patient care hours and number of patient visits per week, the number of practice locations, the area of practice location, the State or Territory of practice, other health professionals working in their practice location, professional referral relationships (sending and/or receiving referrals), the use of diagnostic imaging, and the use of electronic records. In addition, participants were questioned regarding the frequency with which they discuss other health related topics with their patients as part of their care/management plans (e.g. diet, nutrition, alcohol, smoking, occupational health, nutritional supplements and medication). Participants were asked about the frequency with which they treat patients presenting with a range of conditions (i.e. neck pain, thoracic pain, low back pain, lower limb musculoskeletal disorders, upper limb musculoskeletal disorders, postural disorders, degenerative spine condition, headache disorders, migraine disorders, spinal health maintenance/prevention, and non-musculoskeletal disorders) and a range of patient subgroups (i.e. children, older people, Aboriginal and Torres Strait Islander people, pregnant women, people with work-related injuries, people with traffic-related injuries, people receiving post-surgical rehabilitation, and non-English speaking ethnic group(s)) with response options of never, rarely, sometimes, and often. Participants were also asked about the frequency with which they employ a range of techniques/methods (i.e. drop-piece techniques/Thompson or similar, bio-mechanical pelvic blocking/sacro-occipital technique, instrument adjusting, chiropractic biophysics, high velocity, low amplitude adjustment/manipulation/mobilisation, applied kinesiology, flexion-distraction, functional neurology and extremity manipulation) and musculoskeletal interventions (i.e. dry needling or acupuncture, soft tissue therapy/trigger point therapy/massage therapy/stretching, electro-modalities, heat/cryotherapy, orthotics, and specific exercise therapy/rehabilitation/injury taping) in their patient management with response options of never, rarely, sometimes, and often.

### 2.3. Statistical analyses

Statistical analyses were conducted using the statistical software Stata 13.1 and the Statistical Package for Social Sciences software (IBM SPSS Statistics for Windows, release 22.0. Armonk, NY: IBM Corp.). The frequency of chiropractors treating athletes or sports people was the dependent variable for this analysis, and data on the frequency were merged into two categories: 'often' versus 'never/rarely/sometimes'. The same procedure was applied to independent variables with the same format, (e.g. items determining the frequency with which the practitioner discussed health related topics with their patients, treated patients presenting with pre-specified conditions or particular patient groups, and used different techniques or musculoskeletal interventions).

Characteristics were compared between chiropractors who reported 'often' treating athletes or sports people versus those chiropractors who reported treating athletes or sports people less than often via Student's *t*-tests for normally distributed continuous variables and nonparametric Kruskal Wallis tests for continuous data with non-normal distribution patterns, and  $\chi^2$ -test for categorical data. Data are presented as means and standard deviations, median and range, or absolute and relative frequencies. Influential factors of frequently treating athletes or sports

Download English Version:

<https://daneshyari.com/en/article/8563312>

Download Persian Version:

<https://daneshyari.com/article/8563312>

[Daneshyari.com](https://daneshyari.com)