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ORIGINAL ARTICLE

Analysis of the chief complaints of older patients seeking chiropractic care at a teaching clinic and potential implications for clinical education

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Objective: To describe the chief complaints of people older than 65 years who seek chiropractic care at a chiropractic teaching clinic and assess the case mix available at the clinic.
Methods: One hundred patient files were included in this study. Patient files were included if the patient was older than 65 years when he or she initiated care at the teaching clinic. Data on age, sex, and chief complaints were recorded.
Results: Of the patients included in this study, 55% were female. The mean age of patients was 69.5 years, with an age range of 65–88 years. The most common chief complaint was low back pain, with 45% of patients reporting this as their chief complaint. The second most prevalent complaint was neck pain, followed by patients seeking care with no presenting complaints (14%) and patients with extremity complaints (8%). Groin pain, hip pain, balance problems, headaches, and visceral complaints were also reported.
Conclusion: The most common reasons that older patients presented for chiropractic care were for back and neck pain. The case mix was considered similar to practices in the country.

Key Indexing Terms: Chiropractic; Education; Low Back Pain; Neck Pain

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INTRODUCTION

Aging is a nonreversible fact of life that results in an eventual decline in the total capacity of various organs and systems, decreasing the body's ability to adapt to the stresses of the environment.[1] With the increased life span and decreased birth rates in much of the developed world over recent decades, the population is rapidly aging.[1] Recent statistics show that around 8.5% of the world's population (617 million) is older than 65 years, and by the year 2050 this proportion is expected to double to 17% (1.6 billion).[1] An aging population will put an immense strain on the health care system due to the various complications that commonly arise with aging.[2,3]

In New Zealand, the population of older people nearly doubled from 1981 to 2013 and is expected to double again in 25 years' time, in line with the aging population of the rest of the world.[4] With aging, the probability of injury through various causes increases, especially through the risk of falling.[5] Studies show community-dwelling people older than 65 have a 30%–40% chance of falling per year.[6]

Recent research indicates that the main reason older adults seek chiropractic care is for musculoskeletal pain syndromes, especially neck and low back, with patients reporting improvements whilst utilizing chiropractic care.[7] Other reasons older people seek chiropractic care include upper and lower extremity pain, migraines, dizziness, and cervicogenic headaches.[7] There is preliminary research to suggest chiropractic care or other manual therapies may help some people with such symptoms.[6,8–11] Hawk reported that older adults also present to chiropractors with chief complaints of cardiovascular symptoms, Raynaud's phenomenon, hypertension, stress, gastrointestinal problems, rheumatoid arthritis, fatigue/low energy, fibromyalgia, and scoliosis, as well as for disease prevention, health maintenance, and well-being.[12] There is limited research associating chiropractic care with an improvement in nonmusculoskeletal symptoms, such as chronic obstructive pulmonary disease, constipation, depression, Parkinson's disease, multiple sclerosis, pneumonia, spinal stenosis, and urinary incontinence.[7,13] However, these studies taken together indicate that older people seek chiropractic care for both musculoskeletal and nonmusculoskeletal conditions, and for general health and well-being.

The New Zealand College of Chiropractic (NZCC) intern training center is open to the public for people of all ages. Chiropractic care is provided by 3rd- and 4th- year

interns in their final years of study under the direct supervision of registered chiropractors. As part of an initial consultation process, demographic and other information is collected, including age, sex, chief complaint, and other health information. The aim of this study was to identify the chief complaints of people older than 65 years who seek chiropractic care at the chiropractic teaching clinic and to assess if they represent an adequate case mix to prepare students to enter practice.

METHODS

For this study, data from patient files were collected in March 2017. Inclusion criteria were that the patients were 65 years or older at the time they started their chiropractic care. Any file for which the patient was younger than 65 years at the time of starting chiropractic care was excluded from this study.

The information on chief complaint was collected from the patient file. Data on patients were only included in data collection if the file contained a full history and physical examination. The chief complaint was considered to be the main reason the patient indicated for attending the clinic. Each patient's chief complaint was allocated to a category that matched the complaint. For example, if the patient complained of lower spine pain with pain into the leg, the category was lower back pain with radiculopathy. If no chief complaint was described by the patient, the category was no complaint. Chief complaint categories were only created if there was a patient file that recorded that specific complaint. All available files that met the inclusion criteria for this study were included in the review. Information was recorded and analyzed using Microsoft Excel (Microsoft Corp, Redmond, WA).

No personal details from each patient, such as name and contact details, were recorded, to ensure patient confidentiality. The study was approved by the NZCC Research Committee and was given exemption from formal external ethical review by the local Ministry of Health ethics committee, as it was deemed to be an evaluation of existing clinical information and did not aim to improve health outcomes or outcomes for disabled people.[14]

RESULTS

Demographics

Of the 3513 active patients at the time of this study, 100 patients (2.8%) were identified as being eligible for inclusion into this study. The youngest patient was 65 years old, and the oldest patient was 88 years old at the time of their initial visits. The mean age was 69.5 years (SD = 5.3 years), and the median age was 70 years. The percentage of females was slightly higher than males, with females representing 55% ($n = 55$) of the population and males 45% ($n = 45$).

Chief Complaint Analysis

There were 8 categories of chief complaints (Table 1). Overall, 68% of patients ($n = 68$) reported spinal complaints as their main concern/chief complaint. The second-largest group was those patients who reported no current complaint, comprising 14% ($n = 14$) of the total group.

Extremity concerns were reported as chief complaints by 8% of patients ($n = 8$). Headaches and visceral-related complaints represented the smallest number of chief complaints. Table 1 presents the data for all complaints.

DISCUSSION

This study identified the chief reasons why people older than 65 sought chiropractic care at our chiropractic teaching clinic. These reasons were primarily for spinal-related complaints, but the second-largest group of patients was those presenting with no chief complaint.

In the present study, slightly more females (55%) than males (45%) presented for chiropractic care. This is consistent with the sex breakdown of the older New Zealand population, with the 2013 census of the New Zealand population reporting a higher proportion of women (54.1%) than men (45.9%) in the 65+ age bracket.[4]

There have been a number of similar studies conducted at chiropractic teaching clinics around the world.[7,15–18] However, it must be noted that these other studies included patients of all ages.[15–19] The only other New Zealand study, also performed at the NZCC by Holt and Beck in 2005, found that the majority of patients' chief complaints included low back pain (38.1%); however, in this study data were collected on all age groups.[19] Studies from teaching institutes in Mexico, Missouri, and New York have also found similar results when studying all age groups, with the most common chief complaint being low back pain.[15,17,18] The current study reported 45% of older patients had lower back pain as their chief complaint. In the 2005 study, the most common complaint was also low back pain at 38.1% for all age groups.[19]

The second most common chief complaint of the current study was neck pain at 21%, which was a similar result (23%) to a study conducted at a chiropractic teaching college in the United States.[18] Interestingly, the second most common chief complaint in US[13] and Mexican[15] studies were extremity complaints at 29.5% and 28%, respectively. Extremity complaints in the current study were reported by 8% compared with the previous NZCC study that reported extremity complaints by 5.8%.[19]

In the current study, 14% of the older patients reported no chief complaint. This finding is also supported by the previous New Zealand study that reported 11.6% of patients of all ages with no chief complaint.[19] Studies from other chiropractic colleges in the United States and Mexico reported less than 1.0%-1.8% of patients of all ages with no chief complaint.[15] It is possible these patients were seeking to experience chiropractic care or maintain their health status, but more research is needed to ascertain this.

A potential issue with this current study is that it is limited to reviewing patient history forms for data. It does not take into consideration whether any of the patients who presented for care had a different motive that drove

Table 1 - Chief Complaints of Patients Older Than 65 Years of Age Presenting for Chiropractic Care

Complaint	% Patients	*n*
1. Low back pain (no referral)	**45.0**	**45**
Low back pain (no referral)	28.0	28
Low back pain (with referral)	17.0	17
2. Thoracic pain	**2.0**	**2**
3. Cervical pain (no referral)	**21.0**	**21**
Cervical pain (no referral)	17.0	17
Cervical pain (with referral)	4.0	4
4. Headaches	**1.0**	**1**
5. Visceral conditions	**1.0**	**1**
6. Upper extremity	**3.0**	**3**
7. Lower extremity	**5.0**	**5**
8. Groin pain	**1.0**	**1**
9. Hip pain	**3.0**	**3**
10. Balance	**4.0**	**4**
11. Wellness care/no complaint	**14.0**	**14**
Total	**100.00**	**100**

their attendance. Anecdotal information from NZCC students suggests family members attend the center to experience chiropractic care and support their family members (students), rather than because of a problem they wish to solve. Further research could investigate this possibility through a more qualitative means, perhaps by utilizing interviews of small groups.

Understanding the reasons that people seek chiropractic care allows a college to perform curriculum review to ensure that student education covers relevant chief complaint areas in-depth. If, in a curriculum review, a chief complaint category is found to not have been adequately covered in the academic portion of a chiropractic training program, it would behoove program leaders to include it for upcoming cohorts of students. Furthermore, to maintain accreditation with the Council on Chiropractic Education Australasia, the chiropractic college this study was performed at is obligated to report its case mix data to CCEA on an annual basis. This reporting is to show that the clinical program gives each student a varied pool of patients to see and, therefore, gain experience with all types of patients. The overarching purpose of this oversight is to ensure chiropractic students experience a case mix similar to what would be expected in a private chiropractic practice. This study helps to assess whether our chiropractic college meets these educational standards, and, if not, it allows the college to ensure each student does experience this by addressing patient recruitment strategies for the student chiropractic clinic.

If any gaps in students' case mix were identified, then the next step would be to create solutions geared around closing those gaps. Possible solutions could encompass students sharing case management of particular cases, preselection and allocation of patients to specific interns lacking experience with certain cases, or the use of a grand-rounds scenario in which multiple students can interact with patients with a certain chief complaint.

The results of research like the present study allow review of curriculum content in courses containing diagnosis, chiropractic management, neuroscience, and preclinical preparatory courses. The case mix data from this study also allow any modification of course content to mirror trends that are seen clinically in the student chiropractic clinic. In other words, this research informs clinical curriculum sequencing and relevance.

CONCLUSION

In general, older patient characteristics and their chief complaints at our clinic appear similar to those of other chiropractic colleges studying all age groups.[13,15] This study provided demographic and chief-complaint data that can be used for planning chiropractic clinical competency training. Future research could investigate if the mix of clinical presentations of elderly patients provides chiropractic interns with appropriate learning opportunities to achieve entry to practice competencies.

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Author Contributions

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