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## ORIGINAL ARTICLE

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### Perceptions of Ontario chiropractors on business education in chiropractic schools

Michael A. Ciolfi, DC, MBA, DBA, Ayla Azad, DC, Mohammed Al-Azdee, PhD, Andrew Habib, DC, Amanda Lalla, DC, Madine Moslehi, DC, Alex Nguyen, DC, and Bitu Ahmad Panah, DC

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**Objective:** Chiropractic, as a business in the health care system, has a component of entrepreneurship. Therefore, it is important to have business education in chiropractic schools. This study examines perceptions of business education in chiropractic schools as evaluated by Ontario, Canada, practicing chiropractors.

**Methods:** We conducted a series of interviews with 16 chiropractors practicing in Ontario. Questions aimed at analyzing 2 levels of chiropractors' perceptions on the quality of business education they received. The questions were designed around 2 concepts: perceived level of business knowledge acquired and current level of knowledge for 6 business topics. The topics included accounting and finance, organizational behavior and human resources, legal and ethical issues, strategic management, managerial decision making, and operational management. Interview responses were analyzed by grouping significant statements into themes followed by descriptions of what and how the subjects experienced the phenomena.

**Results:** The interviews revealed that Ontario practicing chiropractors' requirements for education in business skills are both broad and essential, embracing most if not all major business domains. Many participants indicated that the status of business education in chiropractic schools is minimally contributing to business skills following graduation.

**Conclusion:** Producing chiropractors with entrepreneurship skills requires enhanced business education in chiropractic schools. Perceptions of Ontario chiropractors reveal a gap between skill-oriented business training in chiropractic education and the skills needed to practice within the profession.

**Key Indexing Terms:** Chiropractic; Education; Decision Making; Entrepreneurship

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### INTRODUCTION

The purpose of this study was to investigate the perceptions that practicing chiropractors have regarding the business education they received during program completion at chiropractic schools. Chiropractic academic institutions focus on preparing students to complete rigorous educational programs to graduate individuals capable of delivering high-quality patient-centered care.<sup>1</sup> As a result of this preparation, there is very little space within curricula to include business education and skills acquisition. Considering that most chiropractic graduates are employed as associates or work as solo practitioners, it makes sense to ensure that newly licensed doctors of chiropractic can enter the professional world with minimal competencies in business management.<sup>2</sup>

The chiropractic profession focuses on providing health care that influences the spine, joints, and musculoskeletal systems with the majority of patients seeking out

chiropractic care for this purpose.<sup>3</sup> Accordingly, it may be beneficial for chiropractors to have a functional knowledge of business skills when graduating from a chiropractic school in order to reduce the stress related to business matters. Possessing business knowledge could also benefit newly licensed chiropractors by decreasing on-the-job training time and trial and error to acquire such skills.

Marketing differentiation is a business skill and can be a valuable asset to create a marketing orientation centered on customer/patient value developed from critical analysis of competitors.<sup>4</sup> Chiropractic visits involve the practitioner directly communicating and physically contacting the patient, encouraging a high level of service orientation. Such unique doctor–patient interactions provide opportunities for product and service differentiation.

In a study conducted by Henson et al,<sup>1</sup> approximately 82% of chiropractors indicated that business training should be provided within their education, while only 16%

said that they possessed such skills. The study identified a significant gap between the level of business knowledge required and level of knowledge possessed. Skills of value included being comfortable with the ability to interpret the details of business loans, leases, management of personal/business finances, and independent employment contractor agreements.<sup>1</sup>

The curricula of doctor of chiropractic programs must meet stringent total hour requirements dedicated to the instruction of patient care and delivery. In the United States, the Council on Chiropractic Education (CCE) accredits programs with specific conditions for meeting initial and subsequent reaffirmation of accreditation standards.<sup>5</sup> CCE accreditation requirements do not state that programs must contain courses in business, and programs have the discretion to provide business education as they choose. The CCE accreditation standard, meta-competency number 5, contains an outcome that students will comply with ethical and legal dimensions of clinical practice.<sup>5</sup>

The Canadian Federation of Chiropractic Regulatory and Education Accrediting Boards contains language related to students having knowledge in ethical practice development, marketing, financial management, and business loans and leases, including the selection of consultants and advisers.<sup>6</sup> The Canadian standards also contain language that students should understand sound business practices related to fees, financial arrangements, and billing and collection procedures as part of educational clinical competencies.

An examination of the curricula and calendars of 5 chiropractic programs, as posted on their websites, reveals that the level of business-related content is contained within courses ranging from 1.2% to 5.4% of the total instruction hours. The mean percentage from the 5 schools was 3.3%.<sup>7-11</sup> Considering that the minimum number of instruction hours each chiropractic program must have to meet accreditation requirements is 4200, results reported from the previous analysis demonstrate that the number of instruction hours of business education ranges from 50 to 227 hours, with an average of 138.

A similarly published paper, utilizing the identical survey instrument from the Henson et al.<sup>1</sup> study, was performed to examine the level of business knowledge required compared to the current level of business knowledge for 8 items related to practicing chiropractors in Ontario, Canada.<sup>12</sup> The 8 business items that were examined in these 2 studies included (1) organizational behavior and human resources, (2) strategic management, (3) finance, (4) marketing, (5) law and ethics, (6) accounting, (7) managerial decision making, and (8) operations and systems management. The methodology of the 2 studies combined the high (4) and very high (5) responses from the survey instrument, for knowledge required and current knowledge, followed by calculations to determine the differences between the measured values. Strategic management and marketing had the largest gap with a percentage difference score of 20.1%. Accounting and organizational behavior differences were at percentage scores of 15.7% and 15.3%, respectively. Operations and

systems management had a difference of 13.8%, followed by legal and ethical at 13.1%, managerial decision making at 9.4%, and finance at 9.2%.<sup>12</sup>

Evidence exists to illustrate the need for a model curriculum for practice building within the curricula of chiropractic programs.<sup>13</sup> Gleberzon et al.<sup>13</sup> posited that chiropractic curricula should include instructional time dedicated to business skills and financial acumen. Also noted was the need to include specific applied management skills that directly relate to the type of practice and patient care unique to the chiropractic profession. Moreover, other skills development included patient management with a focus on ethics to ensure that best practices are followed for health care delivery and business operations. With the current costs of chiropractic education, it may be beneficial to ensure that graduates have an adequate level of business skills, including accounting, financial management, marketing, and strategic planning. Such training has the possibility of enabling practice success, increasing the return on investment for obtaining a chiropractic education.<sup>14</sup>

Although chiropractic programs have very similar curricula designed to meet accreditation standards, there is a lack of consistency between programs regarding a comprehensive model for business and management education.<sup>15</sup> Moreover, previous studies have confirmed the need for business education within chiropractic curricula.<sup>1,12-14</sup> Each program could perform an analysis of their curricula to include business topics without adding additional credits or teaching loads. A variety of instructional methods could be employed to deliver business education to chiropractic students utilizing educational technologies, including online methods.<sup>16</sup> Students could spend time in functioning chiropractic offices observing both patient encounters and business operations, noting the integration of patient care and business procedures without additional program costs.

Developing and instilling business and financial insight into individuals when they are students could be of benefit to both their personal life and their career as a chiropractor. Students tend to overestimate business income, resulting in increased financial liability, levels of stress, and possible business failure.<sup>17</sup> This suggests that there is a knowledge gap between financial attitude and sound business practice. Students may benefit from a broader foundation of financial knowledge to plan for capital and operational expenses, unexpected expenses, and long-term goals.

Financial stress can be experienced during a chiropractic program. Hester et al.<sup>18</sup> commented that chiropractic students experienced increased levels of stress as the program progressed and financial commitment increased. From this same study, 40% of students indicated that they were not coping well dealing with financial stress, affecting their ability to study. Providing business and financial education to chiropractic students while they are completing their program of study could help students critically appraise their spending habits and live within their means.

Existing ethics courses could also include the marketing of a practice and products to patients that are not

misleading false and deceptive as well as avoiding conflict of interest with the dispensing of retail products within a practice.<sup>19–21</sup> Patients are supportive of chiropractors selling products provided that it was undertaken with integrity and within the practitioners' area of expertise.<sup>22</sup> Truth in advertising and ethical practice development will serve patients well and prevent or reduce false advertising and malpractice claims.

Meeting office overhead expenses, such as licensure renewal, association fees, malpractice/liability insurance, continuing education, and other office costs, can be a challenge. Chiropractors usually have an autonomous, somewhat isolated practice, similar to a dentist, with a strong dependence on technical skills, private business ownership, and a reliance on third-party payers.<sup>23</sup> Moreover, there is evidence that consumers are exposed to divergent perspectives on what constitutes chiropractic.<sup>24</sup> A pilot study that gathered data from nonpracticing chiropractors indicated that the most important factor for discontinuing practice was the inability to meet office overhead costs.<sup>14</sup> The study revealed that the actual income from operating a practice was much lower than expected. Accordingly, the exploration of different business models, focusing on diverse patient populations and lowering costs with improved quality of care, may lower overhead costs and costs to patients.<sup>25</sup> Thus, the purpose of this study was to investigate the perceptions that practicing chiropractors have regarding the business education they received during their education at chiropractic schools.

## METHODS

This research utilized a qualitative methodology and phenomenological strategy of inquiry via semistructured interviews. This approach was selected as the preferred method to study several individuals' experiences with respect to identified phenomena.<sup>26</sup> The qualitative interview questions were developed from a validated and reliable survey instrument used on previous quantitative studies to examine the level of business knowledge of chiropractors.<sup>1</sup>

Chiropractic students from the Canadian Memorial Chiropractic College (CMCC) were trained to conduct the interviews. The 5 student interviewers had minimal knowledge of the individuals they were interviewing. The students obtained knowledge and skill on how to conduct qualitative interviews as part of their research methods course. Interview questions were pretested by conducting pilot interviews with 4 faculty members from the CMCC.

Purposeful sampling was operationalized to identify practicing chiropractors from the province of Ontario as potential participants. The purposeful sampling method was selected for the identification and selection of information-rich cases related to the phenomenon of interest.<sup>26</sup> Participants were selected to maximize the differences between shared experiences relevant to the objectives of this research process.<sup>26</sup> Thus, participants were not randomly selected. Accordingly, 16 practicing chiropractors were selected as participants and separated

into 4 different categories based on the number of years spent in the profession: 0–5 years, 6–10 years, 11–15 years, and 16+ years of practice.

The inclusion criterion was to select participants from a pool of individuals known to have different levels of practice experience at the previously noted intervals. All the individuals contacted agreed to participate. Each of the 5 students were involved in interviewing the 16 participants. Half of the interviews were conducted in person and the other by telephone. Bias was minimized by using predetermined questions and nonbiased interviewing techniques. Each interviewer was provided the identical questions with each question containing a specific focus and an open-ended design to avoid yes or no responses. Recording devices included smartphones and laptops with transcription performed by the interviewer who conducted the interview. Data were then placed into spreadsheets to be manually reviewed and analyzed by an experienced qualitative researcher and were selected to be analyzed by themes rather than years of experience to provide a broad view of the business topics across years of practice.

The participants were interviewed to acquire their perspectives/opinions and experiences as chiropractors regarding the level of business knowledge obtained from their chiropractic educational program, in different business categories. Accordingly, the participants were asked the following 2 questions:

1. What were your perceived strengths and weaknesses of the business education you received in your chiropractic school?
2. Reflecting on your past experiences, what improvements would you like to see in your business education?

In follow-up questions related to question 1, participants were asked to indicate their perceived strengths and weaknesses from the education they received for specific business areas: (1) accounting and finance, (2) organizational behavior and human resources, (3) legal and ethical issues, (4) strategic management, (5) managerial decision making, and (6) operational management. Concerning question 2, participants were asked a follow-up question to obtain their thoughts on how the business education they received could be improved and how this could best be done using the following specific categories: (1) strengths, (2) weaknesses, (3) experiences, and (4) improvements.

Ethical considerations and the permission to collect data from human subjects were vetted and approved by the institutional review board of the CMCC (approval no. 1403X01). Letters of approval and consent forms were delivered to all participants via mail or e-mail. Participants were given the option to return the signed letter of approval and consent form via fax or e-mail to the investigators. Depending on the availability of the participants and their proximity to the greater Toronto area, the semistructured interviews were conducted in person or by telephone. To ensure that all interview data were captured, interviewers used electronic recording devices. Investigators transcribed the interviews, and the data were analyzed to uncover themes and answer the

**Table 1 - Participant Demographics**

Gender	Graduation Year	School of Graduation	Date of Interview	Interviewer
Practice experience, 1–5 y				
Male	2011	Canadian Memorial Chiropractic College (CMCC)	03/26/2014	#1
Female	2011	CMCC	03/26/2014	#1
Female	2012	CMCC	03/26/2014	#2
Female	2012	CMCC	03/26/2012	#3
Practice experience, 6–10 y				
Male	2006	CMCC	03/26/2014	#2
Male	2007	CMCC	03/26/2014	#3
Male	2005	CMCC	03/26/2014	#4
Female	2006	CMCC	03/26/2014	#3
Practice experience, 11–15 y				
Male	2003	CMCC	03/04/2014	#2
Male	1998	National	03/04/2014	#4
Male	2000	CMCC	03/04/2014	#5
Male	2000	CMCC	03/04/2014	#2
Practice experience, 16+ y				
Female	1997	Northwestern	04/04/2014	#5
Male	1991	Palmer	04/04/2014	#1
Female	1991	Palmer	04/04/2014	#5
Female	1973	CMCC	04/04/2014	#4

research questions by aggregating the responses from the participant pool.

Data were analyzed by the following processes: (1) develop a list of significant statements, (2) group the statements into units related to the research questions, (3) group significant statements into themes as defined by the research questions, and (4) write descriptions of what and how the subjects experienced the phenomena.<sup>26</sup> For this study, the phenomena were the participants' perceptions of the business knowledge they obtained within their chiropractic education. The interview data were aggregated from all respondents as related to the research questions of the study.

## RESULTS

Data provided by the 16 participants (Table 1) revealed that 12 graduated from the CMCC, 2 from the Palmer College of Chiropractic (Davenport, IA), 1 from the Northwestern Health Sciences College of Chiropractic (Minneapolis, MN), and 1 from the National University of Health Sciences (Chicago, IL). Therefore, 25% of the participants graduated from US schools. This is an accurate representation of practicing chiropractors within the province of Ontario.<sup>27</sup> There were 9 males and 7 females in the study. Participant responses for the first interview question and the relevant follow-up questions are aggregated and summarized in Table 2.

For accounting and finance, participants' responses ranged from a simple no to very little and not enough. Responses for organizational behavior and human resources revealed a range, starting from no education, very little, moderate, and, "Yes, this topic was covered." The yes answers included specific descriptions of such topics as staffing, hiring, and terminating staff. Responses for

ethical and legal issues indicate that these topics were covered either very well or fairly well, while some participants said that ethical and legal issues were overdone. Within the domain of strategic management, participants' responses ranged from not covered to a good job being done. Managerial decision making was another topic described by participants as not being covered very well. The range of responses included no education provided for decision making, with not enough real-life experiences to confirm the delivered knowledge. Regarding operational management, the responses varied from no education provided to only the basics of running a practice.

The majority of respondents commented that ethical training was done very well, delivered with the impact to prepare chiropractors to run a health care practice in an ethical and professional manner. Some participants described the guest speakers used for this topic as very informative, including lawyers who explained situations and scenarios to avoid litigation. Conversely, accounting and finance were covered with the least depth and breadth. Respondents commented that more education and experience are required to understand the basics of accounting and financial management to run a successful health care practice. The remaining topics were covered with a large variety of discrepancy. For example, a participant noted that organizational behavior/human resources were covered well in the program, as it was delivered by a seasoned chiropractic practitioner. Conversely, other participants indicated that this topic was not covered and/or that minimal time was spent on these topics.

Table 3 displays results for the second interview question categorized into 3 sections: strengths, weaknesses, and improvements from the participants. Comments

**Table 2 - Participant Responses to the First Interview Question and Relevant Follow-Up Questions**

<b>What Were Your Perceived Strengths and Weaknesses of the Business Education You Received in Your Chiropractic School?</b>	<b>Number of Responses</b>
Accounting and finance	
Not covered	13
Not covered enough	2
Would have liked to have had more	1
Organizational behavior and human resources	
Not covered	8
Covered fairly well by a seasoned practitioner	1
Not enough focus on this topic	2
More time to cover managing people and resources	2
Some minimal training provided for these topics	3
Legal and ethical	
These topics were well covered	14
A lawyer covered the legal aspects very well	1
Topics were well covered and even over done	1
Strategic management	
Fairly good job covering this topic	1
Not provided	14
No training except for managing patients in the clinic	1
Managerial decision making	
Do not recall covering these topics	12
Did not cover this very effectively	3
Some provided; however, no real-life scenarios for how to apply the knowledge	1
Operational management	
Very little coverage on this topic	3
No education provided for this topic	9
Concerning how to run a practice, this was adequately covered	1
Some provided but not enough	3

**Table 3 - Participants' Summary of Responses to Second Interview Question**

	<b>Strengths</b>	<b>Weaknesses</b>	<b>Improvements</b>	<b>Comments</b>
Accounting and finance	Some basics covered	Not enough coverage	Provide general accounting principles	How to read financial spreadsheets
Organizational Behavior and human resources	Covered well when delivered by a seasoned practitioner	Minimal coverage	More time to cover managing people and resources	Increase course time for this topic
Legal and ethical	These topics were well covered	Overdone in many cases	Allocate appropriate time to this topic	Redistribute excess time from this topic to other business topics
Strategic management	Covered well but rarely	Not enough time spent on this topic	Provide examples of how to build a practice	Short- and long-term practice building strategies
Managerial decision making	Topic discussed minimally	Lack of examples on how to apply the knowledge	Provide examples and assignments to apply to actual practice situations	How to select staff; selecting practice location; leadership principles
Operational management	How to run a practice	Practice scenarios; billing practices	Business and personal tax preparation	Building and maintaining a practice reputation
General comments/ topics	Different practice options: associate, partner bringing in expert speakers	Group work with large groups was not effective	For the business plan project, have smaller groups	How to lead; staff motivation; appraise contracts; marketing plan; practice location selection



regarding the participants' experiences are not in the table and appear in the subsequent description. Significant strengths included the idea of having a seasoned practitioner as an instructor and guest speakers who are experts in their fields, with explanations regarding the various types of practice options and the requirements to visit a chiropractic office. Also noted was the value of learning how to complete a business plan, the importance of exploring where to start a practice, and how to secure financial resources.

In the weaknesses category, participants verbalized that some guest speakers lacked focus and shared opinionated knowledge. This is likely due to a program(s) inviting individuals to share their experiences of operating and/or working in a practice environment rather than guest speakers who were experts in their fields. Other comments included the requirement to spend more time on all related business topics and how to lead and motivate staff, appraise contracts, develop a business and marketing plan, and select the best location to start a practice. Also noted was the ineffectiveness of using large groups for a class assignment requiring the completion of a business plan. This may be program specific, as a school with a large student body and large class size would likely have used this approach.

Regarding the experience category, participants voiced that they appreciate the value of their past business training and experiences as solo entrepreneurs in addition to other skills from on-the-job training in a family business. Also noted was a comment of having previous work experience as an office manager responsible for insurance billing and working in a chiropractic office as a kinesiologist. Financial management was included in this category due to some individuals entering the profession with a business education before enrolling in chiropractic school.

The participants had rich responses inviting improvements relevant to aspects of the chiropractic profession concerning building a practice in an ethical manner, starting business training early in the curriculum, and how to prepare business and personal taxes, market a practice, analyze and develop contracts. Further skills attainment could occur by having students complete a small observational rotation in a fully operational chiropractic clinic other than one sponsored or operated by the educational institution.

## DISCUSSION

The study captures the perceptions and opinions of how business education and skills could be of benefit to chiropractic students for both personal and business-related matters. Participants' responses align with 2 previous studies that knowledge gaps exist between the business knowledge required and the business education received during chiropractic school.<sup>1,18</sup> Similar findings within the dental profession indicate that to start and run a dental practice, greater emphasis on business topics is required within the curriculum.<sup>28</sup> The 1 area of business education that the participants indicated as sufficiently

covered was the domain of ethics and legal issues, which also aligns with findings from previous research.<sup>1,12</sup> Students exposed to business principles may experience an added benefit of reduced financial stress during their chiropractic education.

Taxes, both personal and business, as well as other required tax payments to operate a business, were all commented on as topics to learn, matching the results from 2 previous studies.<sup>17,18</sup> A number of participants expressed that they learned about the various levels of taxes and insurance requirements as their business progressed and grew. Learning experiences could be created within a chiropractic program to replicate a business where students investigate tax requirements and other business and financial obligations as part of their clinical education.

Acquiring the skills to be a successful professional is the basis of competency-based education whereby one gains the knowledge, skills, and abilities to apply the theories related to one's profession.<sup>29</sup> The participants opined that including business education earlier in their chiropractic education would be helpful in acquiring the knowledge required to operate a business. Several participants had the opinion that students should complete a practical and/or observational rotation in a fully functional chiropractic clinic.

CCEs from around the globe are responsible for chiropractic educational standards and could offer guidance on the education of the various elements related to chiropractic business practices. Innes et al<sup>30</sup> endorsed that business-related topics should be included and standardized among all governing CCEs. Such standardization would demonstrate an international level of cooperation and create trust to deliver high-quality care and ethical, professional business practices.

The current findings from this study examined 6 areas: (1) accounting and finance, (2) organizational behavior and human resources, (3) legal and ethical issues, (4) strategic management, (5) managerial decision making, and (6) operational management. Previous quantitative studies surveyed practitioners on 8 business topics.<sup>1,12</sup> Brief descriptions of the topics from the 2 previous studies are noted below:

- Organizational behavior and human resources: Office staffing, selecting and terminating staff, and managing and leading staff
- Strategic management: Determining an organization's long-term direction and setting goals and objectives
- Finance: Acquiring, investing, and managing monetary and other resources
- Marketing: Defining target markets and managing products, pricing, communications, and decisions related to defined markets
- Legal and ethical issues: Liability, contracts, labor law, organizational law, and ethical decision making
- Accounting: Managing, recording, reporting, and analyzing financial transactions



**Figure 1** - Chiropractic business curriculum.

- Managerial decision making: Using statistics and research to improve decision making
- Operations and systems management: Managing the processes concerning products and services

Figure 1 suggests 3 possible blocks of topics that could be included within the currently existing instructional hours at chiropractic schools. Recognizing that chiropractic programs have a fully loaded and challenging curriculum, the additional topics could be including into existing courses. The topics from Chiropractic I and II could be included within current business procedure and/or principles and practice courses. Chiropractic III could be folded into the students' clinical training that typically occurs during the final year of a chiropractic program.

### Limitations

This study has several limitations. Only 16 participants were interviewed. From the 16 participants, 12 were from 1 institution in Canada (English speaking) with the remaining 4 from 3 US chiropractic programs. The remaining US programs and the French-speaking Canadian program were not represented. Accordingly, the results from this study are useful as a preliminary pilot/feasibility study for future research consisting of a larger well-powered quantitative survey or mixed-methods investigation.

## CONCLUSION

This article provides the opinions of 16 practicing chiropractors regarding their business education and suggestions of topics that could be included within the curricula of chiropractic programs without additional credit hours. Although limited, this study adds to 2 previous studies for chiropractic schools to examine the content of their business education. An increased amount of business knowledge may provide benefits to graduates involved in chiropractic practice, such as purchasing a practice, leasing equipment or office space, obtaining liability and malpractice insurance, and remitting all applicable local, state/provincial, and federal taxes. Business skills could also benefit the chiropractic student to

manage their personal finances, thereby reducing stress during program completion and their careers.

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## About the Authors

Michael Ciolfi is the interim dean of the College of Health Sciences and director of the School of Chiropractic at the University of Bridgeport, College of Health Sciences, School of Chiropractic (30 Hazel Street, Bridgeport, CT 06604; mciolfi@bridgeport.edu). Ayla Azad is an instructor in the Department of Chiropractic Therapeutics at the Canadian Memorial Chiropractic College (6100 Leslie Street, Toronto, Ontario, M2H 3J1, Canada; aazad@cmcc.ca). Mohammed Al-Azdee is an associate professor of mass communication at the University of Bridgeport, College of Arts and Sciences, School of Public and International Affairs (30 Hazel Street, Bridgeport, CT 06604; malazdee@bridgeport.edu). Andrew Habib is in private chiropractic practice (38 Saylor Drive, Ajax, Ontario, L1T 3K6, Canada; Dr.habib@sportscentres.ca). Amanda Lalla is in private chiropractic practice (96 Winterfold Drive, Brampton, Ontario, L6V 3T3, Canada; Amanda.lalla@gmail.com). Madine Moslehi is in private chiropractic practice (87 Pine Bough Manor, Richmond Hill, Ontario, L4S 1A5, Canada; Madihe.moslehi@gmail.com). Alex Nguyen is in private chiropractic practice (1415 Duval Drive, Mississauga, Ontario, L5V 2W5, Canada; Alexnguyen.dc@gmail.com). Bitu Ahmadpanah is in private chiropractic practice (9275 Bayview Avenue, Unit 2, Richmond Hill Ontario, L4C 9X4, Canada; drbitaa@gmail.com). Address correspondence to Michael Ciolfi, 30 Hazel Street, Bridgeport, CT 06604; mciolfi@bridgeport.edu. This article was received July 2, 2019; revised November 22, 2019, and February 15, 2020; and accepted March 9, 2020

## Author Contributions

Concept development: MAC, AA. Design: MAC, AA. Supervision: MAC. Data collection/processing: AH, MM, AN, AL, BA. Analysis/interpretation: MHA. Literature search: MAC, AA, AH, MM, AN, AL, BA. Writing: MAC. Critical review: MAC, AA, AH, MM, AN, AL, BA.

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