Survey of Income Comparison: General Practice and Sports Certified Doctors of Chiropractic

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ABSTRACT

Objective: The purpose of this study was to determine whether there are differences in reported gross billings and collections between doctors of chiropractic who have obtained a certificate of additional qualification (CAQ) in sports medicine compared with those without a CAQ in sports medicine.

Methods: A cross-sectional study was conducted. An e-mail invitation to participate in an anonymous survey was sent to doctors of chiropractic who hold active certifications with the American Chiropractic Board of Sports Physicians. The respondents were provided a link to a web-based survey that was constructed with similar questions to a national chiropractic survey issued by *Chiropractic Economics* (CE) for the same year (2015).

Results: Three hundred forty-nine sports medicine CAQ doctors of chiropractic responded (23.8% response rate) in comparison to 719 CE respondents. The CAQ respondents averaged \$722 983 in gross billings (9.8% response rate) compared with \$539 046 by CE respondents. Sports medicine CAQ doctors of chiropractic averaged \$452 376 in gross collections (10.4% response rate) compared with \$348 773 by CE respondents.

Conclusion: An analysis of these 2 surveys illustrates that CAQ respondents report higher total annual gross billings and collections than the CE respondents. Improving study methodology may improve response rates and garner a more accurate representation of any differences between doctors of chiropractic with and without CAQs. (J Chiropr Med 2019;18:42-47)

Key Indexing Terms: *Chiropractic; Cross-Sectional Studies; Income*

INTRODUCTION

In the chiropractic profession, there are 2 levels of postgraduate study in the field of sports injury provided by an accredited postgraduate program from an approved chiropractic college. The first level, Certified Chiropractic Sports Physician (CCSP), requires a minimum of 100 hours of postgraduate study including topics such as sports injury, exercise physiology, and nutrition, culminating in a 250-item written examination in multiple-choice format.¹ For those pursuing further postgraduate study to achieve the Diplomate of American Chiropractic Board of Sports Physicians

(DACBSP) designation, an additional 200 hours minimum (totaling 300 hours) of coursework and completion of 100 hours of practical field experience and a writing project are additional requirements.¹ The DACBSP examination consists of a 250-item written examination in multiple-choice format and a 6-station practical examination assessing the candidate's ability to perform psychomotor and critical thinking skills in areas of case management, emergency procedures, manual procedures, taping and bracing, and diagnostic imaging.¹

The option to pursue a sports medicine certificate of additional qualification by means of a full-time postgraduate residency has become more available to doctors of chiropractic. Two chiropractic universities in the United States provide this postgraduate residency opportunity.^{2,3} The resident's role involves various responsibilities as a faculty member and clinician in addition to obtaining practical experience in the sports medicine setting. Often the activities occur in an integrated setting with other health care providers.^{2,3} In addition, these activities may result in a sports medicine Certificate of Additional Qualification (CAQ). These residencies also provide opportunities to achieve other certifications related to the sports medicine

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field, such as earning the Certified Strength and Conditioning Specialist certification through the National Strength and Conditioning Association^{2,3} or training to become an emergency medical technician.³

Similar to the medical profession, the individual's choice to specialize may be influenced by income potential, expansion of the doctor's available services (or tools for providing those services), or broadening their scope of practice.^{4,5} There is a lack of published data regarding chiropractic specialties. A few studies have been published describing the demographics and various practice patterns of doctors of chiropractic.⁶⁻⁹ Only 1 study has reported the gross annual income and practice patterns of doctors of chiropractic who have obtained a postgraduate specialty (diplomate in pediatrics).¹⁰

Davis et al presented trends on income levels for doctors of chiropractic from 1996 to 2005, reporting that, "the inflation-adjusted median of self-reported income fell from \$76 598 to \$67 200."¹¹ A study by Mior and Whaalen stated that the number of new patients a doctor of chiropractic saw was a predictor of their income level.⁶ Currently, there are no published studies analyzing whether specialization has an impact on the income potential of a doctor of chiropractic who has obtained a CAQ. The authors of this study hypothesize that there may be a difference in the income potential of doctors of chiropractic who earned a CAQ from the American Board of Chiropractic Sports Physicians as a DACBSP or a CCSP compared with doctors of chiropractic without a CAQ. With additional training and competency testing within the sports medicine field, the doctors with a sports medicine CAQ provide a hybrid of services (eg, emergency or first response, multidiscipline experiences, additional diagnosis, and management regarding sports-related injuries) that could position them in their community as experts in the field of sports medicine and thereby lead to generation of more new patients than their general practice counterparts, thus leading to a greater income potential.

METHODS

A cross-sectional study was conducted using the web-based survey tool "Survey Monkey" (Survey Monkey, San Mateo, California) to duplicate many of the questions asked by a similar survey previously published by the trade magazine *Chiropractic Economics* (CE) in May 2015.¹² The questions posed for this study included demographics of the doctors (age, sex, years in practice), their practice characteristics (regional location, practice setting, having a multidisciplinary clinic), and questions concerning their gross billings and gross collections. The CAQ survey was delivered via email on December 8, 2016, to the 1495 doctors of chiropractic who hold an active CAQ through the American Chiropractic Board of Sports Physicians in the specialty of chiropractic sports medicine. Respondents were given approximately 30 days to complete the survey.

During the data collection process, all data were deidentified, no internet protocol addresses were stored, and no other personal information could be used to identify any person by the data used in this study. Participation in the survey was voluntary and anonymous, with completion of the survey considered as consent to participate in the study.

The data from the CAQ survey were exported from Survey Monkey into Microsoft Excel 2016 spreadsheets for comparison and analysis with the results of the 2015 CE survey. The statistical analysis used the descriptive statistics tool from the Analysis ToolPak within Microsoft Excel 2016 to calculate mean values and 95% confidence intervals (CIs); other values were obtained from Survey Monkey's response analytics. Results of the CE survey were obtained directly from the publication, and therefore no response rates or CI is included with their values. The participants in the CAQ survey had the opportunity to use free text rather than entering a whole number for questions asking for numerical values. As a result, during the statistical analysis, some answers were excluded because they did not contain any whole numbers. In addition, when a question asked for an average over the course of 1 year, some respondents answered with a range of values. The mean number of these responses were used and entered as a whole number for the survey response. This study was approved by the Southern California University of Health Sciences Institutional Review Board (HOLD003).

RESULTS

Of the 1495 doctors of chiropractic who received an invitation to participate in the survey, 30 of the emails did not reach the intended recipient owing to errors in delivery, bringing the total possible respondents to 1465 receiving the email. One thousand ninety-four CAQs opened the email, and 371 did not open it. A final total of 349 CAQs answered part or all of the survey (23.8% response rate). Thirty-two DACBSPs (2.2% response rate) and 97 CCSPs (6.6% response rate) answered the gross billings question of the survey. Thirty-five DACBSPs (2.4% response rate) and 101 CCSPs (6.9% response rate) answered the gross collections question of the survey.

The demographics of the CAQs who completed the survey are similar to the CE respondents who completed the CE survey. There was a difference between the CAQ and CE respondents regarding how many practiced in a multidisciplinary setting. Doctors of chiropractic with a sports medicine CAQ responded with 41.6% answering that they were in a multidisciplinary setting compared with 29% of the CE respondents.

There were additional differences identified between the CAQ and CE respondents regarding the region of the United States in which they practice. Most of the CAQ respondents were in the West and Midwest regions at

32.5% and 31.3%, respectively. In comparison, the CE respondents were primarily from the Midwest and South regions at 35% and 30%, respectively. Regarding practice setting, both surveys found most of their respondents practicing in a suburban setting, followed by an urban setting and, the least common, a rural setting.

Table 1 provides the demographics and Table 2 the gross billings and collections portion of the survey. Respondents of the CAQ survey reported a mean of \$722 983 ($n = 145$, 9.8% response rate; 95% CI 541 113-904 853) in gross billings compared with a mean of \$539 046 ($n = 719$) by CE respondents. This amounts to a difference of \$183 937 higher gross billings reported by CAQ respondents. In addition, the CAQ respondents reported a mean of \$452 376 ($n = 152$, 10.4% response rate; 95% CI 358 219-546 532) in gross collections compared with \$348 773 ($n = 719$) by CE respondents. Higher gross collections were reported by CAQ respondents with a difference of \$103 603 more than CE respondents. Even though they had a smaller amount of gross collections, the CE respondents collected a higher percentage of their gross billings. Still, the CAQ respondents were calculated to have total collections of \$270 607, and the CE respondents had total collections of \$190 273, thus bringing a final difference between collections for the groups to \$80 334 more for the CAQ respondents.

An additional analysis was performed to evaluate gross billings and collections within the CAQ respondents (Table 3). When evaluating the doctors of chiropractic with a DACBSP, the mean reported gross billings totaled \$945 844 ($n = 32$, 95% CI 544 651-1 347 036), whereas the doctors of chiropractic with a CCSP reported mean gross billings totaling \$745 667 ($n = 97$; 95% CI 516 043-975 293), the difference of which amounts to DACBSP doctors of chiropractic reporting up to \$200,000 higher in gross billings annually than CCSP doctors of chiropractic. An analysis of the mean gross collections results between the 2 groups illustrates the DACBSP doctors of chiropractic reporting a mean of \$515 800 ($n = 35$; 95% CI 325 417-706 183), and the CCSP doctors of chiropractic reporting a mean of \$487, 24 ($n = 101$; 95% CI 367 031-608 217) in gross collections. Thus, there is a difference of \$28 176 higher mean gross collections by the DACBSP doctors of chiropractic.

DISCUSSION

Based on the findings from this study, although there are similar collection percentages between the CE and CAQ, there are differences in the gross billings and collections between CAQ and CE respondents from the 2 surveys. Doctors of chiropractic with a CAQ reported higher gross billings and collections than those from the CE survey. The additional analysis within the CAQ respondents illustrated that doctors of chiropractic who have earned the DACBSP

Table 1. Survey Results: Demographics Comparing the Certificate of Additional Qualifications Respondents With the Chiropractic Economics Respondents

Survey Element	Certificate of Additional Qualification Survey ($n = 349$)	Chiropractic Economics Survey ($n = 719$)
Average age, y	43	47
Male (%)	80.2	78.2
Female (%)	19.8	21.8
Years in practice	15.4	18.9
Solo/owner practice (%)	68.6	62.8
Group practice (%)	15.1	27.1
Associate/employee (%)	10.1	9.6
Multidisciplinary practice (%)	41.6	29
Regions of practice		
West (%)	32.5	19
Midwest (%)	31.3	35
South (%)	16.1	30
East (%)	18.4	16
Other (%)	1.7	>1
Practice characteristics		
Suburban (%)	45.7	49.8
Urban (%)	40.2	29.3
Rural (%)	14.1	20.9

designation recorded higher gross billings and collections than those with a CCSP designation. There may be a variety of reasons for these reported differences of income characteristics. Those who have earned the CAQ may possess increased overall drive, clinical skills, and knowledge that their counterparts do not, and as a result, they may be able to provide a wider scale of services. The ability to provide additional services may provide additional sources of income than the traditional chiropractic practice, which may lead to greater gross billings and collections. Providers with sports medicine CAQ may have increased visibility, trust, and positioning to appeal to physically active individuals, a group that includes individuals who are active in either recreational or competitive sporting activities. The location of any given provider could also have an impact on their income in a variety of ways. For

Table 2. *Values of Billings and Collections*

Respondent Classification	Gross Billings	Gross Collections	Total Collections	Collections %
Doctor of chiropractic with DACBSP/CCSP (n = 349)	\$722983 (n = 145; 95% CI 541 113-904853)	\$452376 (n = 152; 95% CI 358219-546532)	\$270607	62.6
Doctor of chiropractic, CE survey (n = 719)	\$539046	\$348773	\$190273	64.7

CCSP, Certified Chiropractic Sports Physician; CE, *Chiropractic Economics*; CI, confidence interval; DACBSP, Diplomate of American Chiropractic Board of Sports Physicians.

Table 3. *Gross Billings and Collections Within the Certificate of Additional Qualifications Respondents*

CAQ Type	Gross Billings (n = 129)	Gross Collections (n = 136)
DACBSP	\$945844 (n = 32; 95% CI 544651-1 347036)	\$515800 (n = 35; 95% CI 325417-706183)
CCSP	\$745678 (n = 97; 95% CI 516043-975293)	\$487263 (n = 101; 95% CI 367031-608217)

CCSP, Certified Chiropractic Sports Physician; CI, confidence interval; DACBSP, Diplomate of American Chiropractic Board of Sports Physicians.

example, it is reasonable to assume that different regions of the United States would have increased overhead owing to higher costs for business space, therefore increasing the expenses of the business. As discussed in an article by Waalen and Mior, regional variations such as a practice's billing patterns and community acceptance may affect a practice's ability to generate revenue.⁶

This study identifies the need for additional studies to gather information on why CAQ providers may earn more income. A future study could address the clinical services, patient demographics, and other potentially different characteristics between CAQ providers and non-CAQ providers.

Limitations

One of the most prominent limitations was the small number of respondents to this study. The CE response rate was unknown, with 719 respondents but an unknown number of invitations. Less than one-quarter of the active members of the ACBSP responded to the survey. Proportionally, both surveys had small numbers of respondents in comparison to the number of actively licensed doctors of chiropractic throughout the entire United States. In addition, some of the respondents did not complete the entire CAQ survey, leaving the salary portion blank. As a result, incomplete or inappropriate answers were provided, and these responses were necessarily excluded from the study. This further lowered the CAQ response rate and increased the bias of the results. Another limitation includes the lack of information concerning operational expense, which would have an impact on the income results. For example, a doctor who uses more equipment and space for therapeutic exercise and other therapies may have a higher overhead compared with those using low-tech methods of care. The CE survey

results may include CAQ doctors, which would decrease the sensitivity of the comparisons.

Detsky and colleagues discussed the factors determining a physician's choice to specialize, which is likely to be different from physician to physician and based on several variables specific to the individual. The authors identified there may be advances made within medical sciences that create a need for someone to focus their training toward helping patients by using new tools or protocols for a given injury or illness, and physicians may select a specialty based on its prestige, prior firsthand experiences with the given specialty, or the income potential that has been confirmed to accompany specialization.⁵

The US Bureau of Labor Statistics publishes annual data on the chiropractic profession including median salary (\$67520 as of May 2016).⁴ However, this includes any doctor of chiropractic regardless of whether they have obtained a CAQ or not. The Bureau of Labor Statistics also publishes annual data on physicians and surgeons in general practice, but includes categorizations as either a primary care physician or by their medical specialty.⁴ These findings are reported by the Medical Group Management Association, which states, "In 2014, physicians practicing primary care received total median annual compensation of \$241 273 and physicians practicing in medical specialties received total median annual compensation of \$411 852," a difference of \$170 579 higher income for physicians practicing in a specialty compare to those practicing in primary care.⁴ Although most physicians will complete a residency after graduating with their medical doctor degree, there are some graduates who will not be matched with a residency program. In the 2013 Medscape physician compensation report, 89% of survey respondents reported being board certified and the remaining 11% were not board

certified.¹³ According to the report, those without a board certification earned \$150 000 as compared with physicians who are board certified reporting earnings of \$251 000.¹³ Earning a board certification may be a determinant for higher income potential.

Future Studies

An improved methodology designed to increase the response rate of the participants would improve the 95% CIs, lessening the bias, and improve the chances of distinguishing differences between chiropractic provider groups. Future studies evaluating potential differences in the sources of practitioner income, billing characteristics, or number of clinical encounters based upon credentialing are needed.

CONCLUSION

This cross-sectional study compared the gross billings, gross collections, and demographics between the chiropractic specialty CAQ survey and the nonsports CAQ CE survey. This survey identified that doctors of chiropractic with a CAQ in sports medicine report higher annual gross billings and collections compared with their CE counterparts.

FUNDING SOURCES AND CONFLICTS OF INTEREST

No funding sources or conflicts of interest were reported for this study.

CONTRIBUTORSHIP INFORMATION

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Practical Applications

- The findings are the first data on salaries comparing those with a board certification (CAQ) in chiropractic sports medicine to another group without a clear CAQ.
- These findings add information to support pursuing a CAQ in sports medicine because there is a higher potential income reported by those with a CAQ.
- The findings from this research should prompt further studies to investigate whether there is a difference between the various board certification specialties in the chiropractic profession.

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