

Technique Systems used by post-1980 graduates of the Canadian Memorial Chiropractic College practicing in five Canadian provinces: a preliminary survey

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The purpose of this study was to survey 200 randomly selected post-1980 graduates of the Canadian Memorial Chiropractic College practicing in five Canadian provinces to determine which, if any, technique systems they sought out instruction in and/or are utilizing either primarily or secondarily for patient care. Using a systematic sampling approach, 83 eligible data sets were received. Respondents reported to have sought out instruction in a total of 187 technique systems other than Diversified technique. In addition, although 86% of respondents stated they primarily used Diversified technique in practice, they reportedly used 134 different technique systems secondarily for patient care. This calculates to an average of 2.27 different techniques used per respondent. Future studies should survey a larger percentage of practitioners to better assess the validity of these findings.

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L'objectif de cette étude visait à effectuer un sondage auprès de 200 diplômés après les années 1980 du Canadian Memorial Chiropractic College, choisis au hasard, et pratiquant dans cinq provinces canadiennes pour déterminer s'ils avaient eu recours, le cas échéant, aux méthodes fonctionnelles de systèmes techniques et/ou s'ils les avaient utilisés, comme première ou deuxième intervention, dans la prestation de soins aux malades. En se servant de la méthode de l'échantillonnage systématique, on a pu recevoir 83 ensembles de données valables. Les sujets interrogés ont signalé avoir recherché les méthodes fonctionnelles dans 187 systèmes techniques autres que les techniques diversifiées. De plus, bien que 86 % des personnes interrogées aient affirmé avoir fait appel aux techniques diversifiées dans leur pratique, ils ont néanmoins utilisé 134 systèmes techniques différents par la suite dans le traitement des malades. Cela se traduit par une moyenne de 2,27 techniques différentes utilisées par les sujets interrogés. Des sondages ultérieurs devraient porter sur un échantillonnage plus important de praticiens pour mieux évaluer la validité des conclusions obtenues.

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MOTS CLÉS : chiropratique, systèmes techniques

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Introduction

In recent years graduates of chiropractic programs in the United States of America and elsewhere have been returning to Canada to practice chiropractic in ever-increasing numbers.^{1,2} Since many chiropractic programs instruct students in several different technique systems, many of these graduates may return to Canada clinically competent to utilize many more technique systems than their Canadian-trained cohorts, something that is often discussed during meetings of the Technique Consortium of the Association of Chiropractic Colleges (Gleberzon-personal communication). This is because most Canadian trained chiropractors attended the Canadian Memorial Chiropractic College (CMCC) where Diversified technique has been the only technique system taught in the program since the late 1970s.¹ Prior to the 1970s, Gonstead, Sacro Occipital Technique (SOT), Applied Kinesiology, and Logan Basic were included in the CMCC curriculum.³ Since that time, however, the only exposure students attending CMCC have had to other technique systems has been limited to an introductory lecture-based course offered during their undergraduate program (which does not establish any degree of clinical competency) as well as technique clubs that are primarily run by senior students and clinicians. This lack of educational exposure has apparently led to numerous CMCC students and graduates seeking instruction in different technique systems outside the constructs of CMCC's curriculum.⁴ As a result, CMCC students and graduates are paying out-of-pocket to attend outside seminars, which need not necessarily provide the same stringent scientific forums typically encountered in a college setting.⁵ Furthermore, the cost of these programs compounds the already significant debt load of new graduates and perhaps even field doctors alike.²

The purpose of this study was to survey post-1980 CMCC graduates practicing in five different Canadian provinces to determine which, if any, technique systems they: (i) sought instruction in and (ii) are utilizing in their private clinical practices, either as a primary or secondary focus of patient care.

Methods

This study was approved by the Ethics Review Board of CMCC. The study design utilized a confidential multi-question survey. Using a systematic sampling approach, the survey was administered by mail to 40 chiropractors

in each of the following provinces: British Columbia, Saskatchewan, Ontario, Newfoundland and Nova Scotia.^{6,7,8,9,10} The survey consisted of five questions developed by the authors in order to identify CMCC alumni who graduated in 1980 or later. Among these alumni, the survey further sought to identify which, if any, technique systems they had sought instruction in and/or were using primarily or secondarily for patient care.

Randomization

Randomization was achieved by selecting every second practitioner posted on the website of each province's respective chiropractic association, up to a maximum of 40 chiropractors per province. Sample size was limited by lack of funding. Due to the high variability of the number of practitioners practicing in the provinces selected for this study, an equal number of recipients were selected from each province instead of a proportional percentage of total practicing chiropractors. This was done to eliminate potentially low response rates from provinces with relatively few chiropractors.

Confidentiality

The survey did not require respondents to provide any form of personal identification upon its return. Surveys were coded by the authors in order to determine the province the responder was from. For example, the top of a survey to a field doctor in Saskatchewan would be coded with 'sask' whereas a survey to an Ontario field doctor would be coded with 'ont'. To further ensure the respondent's confidentiality upon opening and extraction of the survey, all return envelopes were destroyed.

A second document was also included in the mailing, which contained the instructions for filling out the survey, a description of the confidentiality associated with the survey, and a brief discussion on why the survey was being conducted. No deception was used in this study.

Pretest

Prior to distribution, a pretest was conducted during which the survey was administered to a convenient sample of chiropractors: In this case, 10 CMCC technique tutors, all of whom returned the surveys. This pretest was performed in order to identify any potential problems that may have been present in the survey, such as lack of clarity in the instructions or unclear or ambiguous questions.

Table 1 Total number of surveys received, and total number included and excluded data sets, by province

	Total Received	Inclusion	Exclusion
Newfoundland	25	17	8
Nova Scotia	26	19	7
Ontario	21	19	2
Saskatchewan	26	21	5
British Columbia	22	7	15

Feedback from the pretest participants indicated that only small changes were needed, which were made to subsequent versions of the survey prior to its distribution. It is important to note that information collected from the pretest respondents was not tabulated in the results, so as to eliminate any potential bias, and was destroyed.

Distribution

The survey was mailed to the randomly selected practitioners in the provinces of British Columbia, Saskatchewan, Ontario, Newfoundland and Nova Scotia. These provinces were chosen because at least one of this study's authors hailed from each of these provinces. Return postage was provided to ensure cost-free participation in the study.

Eligibility (inclusion criteria)

In order to be included in the data analysis of this study, surveys had to meet the following inclusion criteria: the respondent must have been a graduate of CMCC from the year 1980 or later, and the completed survey must have been received on or before May 10, 2008. The authors decided that a 1980 year of graduation or later would create a more trustworthy data set since, as previously stated, the undergraduate program at CMCC included instruction in certain technique systems up until the late 1970s, in addition to Diversified technique. Therefore, the authors posited that those students taught technique systems in addition to Diversified technique while at CMCC would have been 'washed out' of the system (by virtue of graduation) by 1980. After that time, and until the present, CMCC graduates would have been instructed only in Diversified technique, at least within the confines of its undergraduate curriculum.

Surveys excluded from the study were those from non-CMCC graduates, CMCC graduates prior to 1980, surveys received after May 10, 2008 and incomplete surveys.

Data Storage

All questionnaires were returned to one of the authors (BG) and kept in a locked filing cabinet. Once analyzed, the surveys were destroyed.

Data Analysis

Data analyzed for this study was: college of graduation; whether respondent graduated before or after 1980; technique system(s) seminars attended either while a student or subsequent to graduation; primary technique system utilized in practice and; secondary technique systems utilized in practice, if any.

Results

Sample size was limited to 200 recipients, of which 120 responses were received (60.0% return rate). Of these, 83 returned surveys met the inclusion criteria (41.5% of all surveys mailed, 69.2% of all surveys returned) (Table 1).

Very similar numbers of eligible data sets were derived from all the provinces, varying in number between 17 and 21, with the exception of British Columbia which yielded only 7 usable data sets. This may be due to the fact that a large number of respondents indicated that they were graduates of Western States Chiropractic College and thus did not meet the inclusion criteria for this study.

Of the 83 data sets that met the inclusion criteria, 73 respondents indicated that they had sought out instruction in other technique systems outside of the curriculum of-

Table 2 Number of post-1980 CMCC graduate respondents who sought out instruction in (seminars attended for) technique systems, by province

Technique System	Province					Total
	Newfoundland	Nova Scotia	Ontario	Saskatchewan	British Columbia	
Activator	2	8	9	15	2	36
Acupuncture	2	2	5	5	0	14
Active Release Therapy	10	5	5	4	1	25
Applied Kinesiology	2	1	4	1	0	8
BEST	0	0	2	1	0	3
CBP	0	1	2	0	1	4
Cox-Flexion Distraction	0	1	2	4	1	8
Cranial Sacral	3	4	2	1	2	12
Gonstead	0	2	0	2	3	7
Graston	1	1	0	0	0	2
Logan Basic	0	0	3	1	1	5
Meric	0	0	1	1	0	2
Network	0	0	1	1	0	2
Nimmo	1	0	0	0	0	1
Palmer HIO	0	0	0	0	0	0
SOT	2	2	0	2	0	6
Thompson	2	4	7	7	3	23
Trigenics	0	0	3	1	0	4
Torque Release	1	0	4	3	2	10
Other	5	3	3	2	2	15
None	3	3	2	1	1	10
	31	34	53	51	18	187

ferred at CMCC (Table 2). Since some respondents indicated that they sought instruction in more than one technique system in addition to Diversified technique, the number of responses in Table 2 exceeds the number of respondents. Not counting Diversified technique, respondents sought out 187 separate instructional seminars on over a dozen different technique systems.

In addition, these 83 respondents reported to use a total of 134 different techniques for patient care (not including Diversified technique), indicating that many field practi-

tioners use more than one technique system in practice. This number is 211 when Diversified technique is included in the total number of technique systems the respondents reportedly used (Table 3). On average, respondents indicated that they sought out 2.27 technique systems in addition to Diversified technique in private practice, with Ontario chiropractors reporting the highest average number ($n = 2.79$) and Nova Scotia chiropractors reporting the lowest average number ($n = 1.74$) (Table 4).

The most popular technique systems sought out or

Table 3 Number of Technique Systems used in private practice by respondents, by province

Technique System	Province					Total
	Newfoundland	Nova Scotia	Ontario	Saskatchewan	British Columbia	
Activator	3	10	8	12	4	37
Acupuncture	2	2	2	2	0	8
Active Release Therapy	8	7	5	2	2	24
Applied Kinesiology	0	1	1	1	0	3
BEST	0	0	0	1	0	1
CBP	0	1	0	0	1	2
Cox-Flexion Distraction	1	0	0	2	1	3
Cranial Sacral	2	1	2	0	0	5
Diversified Technique	15	19	16	20	7	77
Gonstead	0	1	0	2	2	4
Graston	0	2	0	0	0	2
Logan Basic	0	0	0	0	0	0
Meric	0	0	1	1	0	2
Network	0	0	0	0	0	0
Nimmo	1	0	0	0	0	1
Palmer HIO	0	0	0	0	0	0
SOT	1	4	0	2	1	8
Thompson	1	3	6	8	1	19
Trigenics	0	0	1	1	0	2
Torque Release	0	0	1	2	1	4
Other	4	1	1	2	2	9
Total	40	52	44	58	22	211
Total not counting Diversified Technique	25	33	28	38	15	134

used by respondents were Activator Methods Chiropractic ($n = 36$), Active Release Technique ($n = 25$) and Thompson Terminal Point ($n = 23$). This is consistent with data previously published on this topic.^{1,3}

When asked which technique system they consider they use *primarily* for patient care, 71 respondents (86%) chose Diversified technique (respondents were instructed to choose only one technique system). Other technique

systems identified as *primarily* used for patient care included Active Release Technique ($n = 5\%$), Activator Methods Chiropractic Technique ($n = 4\%$), Thompson Terminal Point ($n = 2\%$), Cox-Flexion Distraction ($n = 1\%$) and Gonstead ($n = 1\%$). Of the remaining technique systems listed in the survey, none were chosen by respondents as their primary method of patient care.

However, responses were quite different when respon-

Table 4 Average number of technique systems sought out by post-1980 CMCC graduates outside of its curriculum

Newfoundland	1.94
Nova Scotia	1.74
Ontario	2.79
Saskatchewan	2.43
British Columbia	2.57
Average	2.27

dents were asked to indicate which, if any, technique systems they used *secondarily* for patient care. Thirty four respondents indicated it was Activator Methods Chiropractic Technique (24%), 20 respondents indicated Active Release Technique (15%), 17 respondents indicated Thompson Terminal Point (12%), and 8 respondents indicated Sacral Occipital Technique (6%). It should be noted that 8 respondents reported acupuncture was used secondarily for patient care even though acupuncture is not considered a chiropractic technique system.¹

Upwards of 24 other techniques other than Diversified were identified as techniques used secondarily in the practices of post-1980 CMCC graduates. Since respondents were permitted to choose as many options as they felt applicable to their practice style, this number exceeded the number of returned surveys.

Discussion

Since 1980, CMCC students have been exposed solely to Diversified technique, possibly leaving them underexposed to other technique systems as compared to their foreign-trained colleagues. According to statistics from the Canadian Chiropractic Examining Board (CCEB), only 40% of graduates sitting for CCEB exams between 1995 and 1999 were CMCC graduates,³ and a recent study by Mior and Laporte investigating the economic status of Ontario chiropractors reported that “a substantial number of the new Ontario registrants are graduating from other chiropractic schools (other than CMCC) or migrating to Ontario”.^{2:p108} This may have compelled CMCC graduates to seek out instruction in additional technique systems in order to stay competitive with their

non-CMCC educated colleagues. This problem may be more acute in Ontario, where Mior and Laporte predict will face an oversupply of chiropractors in the near future and where chiropractors are already experiencing a decline in their average net annual income adjusted for inflation.²

Costs associated with taking technique system courses can be quite high, often amounting to thousands of dollars, a cost it would appear respondents in this study were willing to incur during either their student years or as field practitioners. For example, certification in Active Release Technique® for all four modules (spine, upper limb, lower limb and nerve entrapment) is \$7,165 for field practitioners and just under \$5,000 for students,¹¹ and standard full certification in Activator Methods Chiropractic Technique will cost \$297¹² for a student, \$750 for a recent graduate (within first two years of graduation) and \$1,365 for a field practitioner who graduated more than two years before.

In this study, post-1980 CMCC graduates reported that on average, they used 2.27 technique systems in addition to Diversified technique, with some respondents reporting that they have sought instruction in or are using as many as nine different technique systems in private practice. In particular, of the 83 respondents in this study, 187 instructional seminars were sought out on technique systems other than Diversified technique and this same group of respondents used a total of 134 different techniques for patient care (not including Diversified technique). The fact that respondents in this study reportedly use many different technique systems for patient care is a consistent theme in other studies published on this topic.^{1,3,13,14,15} For example, in 1993, the National Board of Chiropractic Examiners (NBCE) in the United States reported that 87.3% of Canadian chiropractors used Diversified technique for patient care, and that 44.2% used SOT, 43.6% Activator Method Chiropractic, 37.7% Meric, 35.0% Gonstead, 32.4% Nimmo/Receptor Tonus, 31% Applied Kinesiology (AK), 30% Thompson Terminal Point, 25.9% Logan Basic, 22.4% Cox Flexion-Distraction, 22.3% Palmer HIO, 22.2% ‘cranial’ techniques and 15.5% listed that they used ‘other’ techniques.¹³ Unfortunately, this survey did not distinguish between those practitioners who simply used a device (i.e. Activator) from those practitioners who used the entire technique system (i.e. Activator Methods Chiropractic Technique).

A few years later, Kopansky-Giles and Papadopoulos reported that Canadian chiropractors used Diversified technique on 76-100% of their patients, 31.4% used Activator, 18.8% used SOT, 14.3% used Thompson, 10.9% used Gonstead, 8.3% Craniosacral therapy (CST) and 6.9% Palmer HIO.¹⁴ Again, respondents in this study were not asked to distinguish between the use of a modality and the use of the complete technique system.

A third study by Watkins and Saranchuk that surveyed CMCC interns and recent graduates from that same time period reported that 84.5% of students thought they would use Diversified technique in practice and 86.7% of graduates reported to do so.¹⁵ As well, 21.6% of CMCC interns thought they would use Activator, 15.5% AK, 14.4% CST, 12.4% Thompson, 11.3% Motion Palpaton Institute (MPI), 11.3% Gonstead, and 13.6% stated would use 'other techniques'. In comparison, 33.3% of CMCC graduates reported they regularly used an Activator, 22% MPI, 20.7% Thompson Terminal Point, 11.3% Gonstead, 9.7% CST, 9.1% Palmer HIO and 13.6% of practitioners listed 'other techniques'. Since that time (c1997) however, there is no published data on the utilization rate of technique systems by Canadian chiropractors.

The most popular techniques respondents in this study sought out for instruction or used for patient care were Activator Methods Chiropractic, Active Release Technique, and Thompson Terminal Point, which reflects the previously published data discussed above as well as surveys of CMCC students in 2000 and 2001 which reported 90% of them expressed an interest in learning these techniques (in addition to Gonstead technique) during their undergraduate education in the core curriculum, as elective courses or within a continuing educational program.^{1,3}

With regards to the primary technique used by CMCC alumni, 86% of respondents in this study reported that Diversified technique was their main treatment method, when asked to choose only one. When compared to previously published data on this topic, it would seem that CMCC graduates are consistently and predominately utilizing Diversified technique for patient care, regardless of additional techniques systems they learn. It can be postulated that this is likely due to the exclusive instruction in Diversified technique while at CMCC for patient care, compared to shorter, more limited exposure to other technique systems taken at weekend seminars. It should also

be noted that in their fourth year interns at CMCC are restricted to utilizing only Diversified technique for patient care, even if they have sought out instruction in, or are certified in the use of, other technique systems not taught at CMCC.

That said, when surveyed as to which technique systems they utilized *secondarily* in practice, respondents in this study provided a wide range of responses. This supports the observation that CMCC graduates are taking and utilizing technique systems in practice in addition to Diversified technique. Reasons for this may include: CMCC graduates attempting to stay competitive with their non-CMCC trained colleagues; CMCC graduates attempting to increase their market share of patients; CMCC graduates learning techniques which advertise themselves as less physically demanding on the practitioner; an attempt to build a more diverse chiropractic "tool-box"; and an desire to keep up-to-date with current chiropractic trends.

Limitations of this study

There were many limitations to this study. Surveys were sent to only 200 chiropractors in only five Canadian provinces (40 chiropractors each), with a response of 41.5%, generating a total of 83 data sets. Because of the low response rate and relatively small number of data sets, it is possible that the respondents are a non-representative sample of chiropractors from each province and readers are cautioned not to over-generalize the results reported in this manuscript. Future studies ought to include a larger sample size and include all Canadian provinces and territories. Furthermore, the survey may not have listed all possible technique systems Canadian chiropractors may be using for patient care. Only one mailing was distributed to the randomly selected chiropractors due to budgetary constraints; other studies may benefit from a coding system that would allow for follow-up mailing to the same chiropractors who did not return a survey initially. Chiropractors selected to receive the survey were asked if they graduated from CMCC 'in 1980 or later', which may have been confusing to some recipients. Moreover, this study did not clearly distinguish between those practitioners who were using a device or modality (i.e. activator, drop table) from those practitioners who followed a complete technique system (Activator Methods Chiropractic Technique and Thomp-

son Terminal Point Technique, respectively). Lastly, respondents may have been unclear by what the authors meant when they asked which technique a chiropractor used primarily versus secondarily in private practice.

The information gathered from this study may support the recommendation that CMCC curricular planners consider offering instruction in technique systems other than Diversified technique in its undergraduate program, as an elective program, or within a continuing education course. Not only would such a curricular plan apparently meet the needs and interests of CMCC students and graduates, it may prove to be an important source of revenue for the college while potentially increasing its graduates competitiveness and partially off-set the seemingly gloomily predictable future for some Canadian chiropractors.²

Conclusion

Data gathered from this study supports the hypothesis that post-1980 CMCC graduates are commonly seeking instruction in a large number of technique systems other than Diversified technique, and are using these technique systems in their private clinical practices for patient care. Although still principally using Diversified technique as their primary method of patient care, many respondents in this study reportedly used a plethora of other technique systems secondarily in practice as well. Among the most popular of these technique systems used secondarily were Activator Methods Chiropractic, Active Release Therapy and Thompson Terminal Point.

Based on the preliminary data reported here, it would seem appropriate and timely to conduct a larger study on this topic, using an improved survey instrument, which surveys all post-1980 CMCC graduates in all Canadian provinces and territories to determine the validity of these results.

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