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ORIGINAL ARTICLE

An investigation into the demographics and motivations of students studying for a chiropractic degree

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Objective: This research aimed to investigate motivations for studying chiropractic, and to determine what students look for in a course/college and potential barriers to studying chiropractic.
Methods: The study design was a cross-sectional survey. Following IRB/Ethical approval, a paper-based questionnaire was distributed to students at McTimoney College of Chiropractic. Demographic data were compared to another chiropractic college in the United Kingdom.
Results: The questionnaire response rate was 70.8% ($n = 121$). Motivating factors for studying chiropractic included a desire to help others (54.5%, $n = 66$), with 44.6% ($n = 54$) attracted by chiropractic's holistic, drugless approach to health. Previous help from chiropractic influenced 55.4% ($n = 67$) and 22.3% ($n = 27$) felt chiropractic had "changed their life." Just over half of the respondents (55.4%, $n = 67$) viewed the ability to work while studying as extremely important and 73.6% ($n = 89$) said they could not have studied chiropractic without this.
Conclusion: Previous help from chiropractic care was a common motivation for studying chiropractic. The ability to work while studying was seen as vital by many students and, without it, the vast majority felt they could not have studied chiropractic.

Key Indexing Terms: Chiropractic; Education; Motivation; Students

J Chiropr Educ 2013;27(2):128–134 DOI 10.7899/JCE-13-8

INTRODUCTION

To practice in the United Kingdom (UK) as a chiropractor, an individual must be registered with the General Chiropractic Council (GCC)[1] and must have graduated from one of the three UK approved colleges, which are the Anglo-European College of Chiropractic (AECC), the McTimoney College of Chiropractic (MCC), and the University of Glamorgan. The future of the UK chiropractic profession relies on these colleges attracting and retaining enough students of the right caliber, and completing their education through to graduation.

In 2001, Good and Fried remarked that the objective of any chiropractic college is to deliver highly proficient chiropractors.[2] Therefore, it is essential for colleges to know more about what Phillippe and Sullivan subsequently called the college's "human capital," referring to the student population.[3] Educational systems have been evaluated previously in chiropractic colleges, but these systems usually focus on the college rather than the student population.[1,4] Students have a free will; thus, it is important to understand what attracts them to chiropractic, what makes them choose a particular course, and what might have prevented them from studying chiropractic. Gathering data on these areas provides a greater insight into the student body and, perhaps more importantly, would allow chiropractic colleges and the profession to plan for the future and address any issues raised.

Facts about chiropractic careers are freely available,[5] and chiropractic offers the potential of a good income, prestige, and independence.[6] However, there is a paucity of data on the underlying reasons why students chose chiropractic. Dowle found that more than 97% of students choosing chiropractic considered that it was the right choice for their future, but does not discuss what influenced those choices.[7] Byfield suggested some were drawn to chiropractic because of the help they received from a chiropractor,[8] while Coulter et al. cite a study by Wardwell that concluded chiropractic's approach to health was the attraction.[9] In contrast, Rolfe et al. found that medical school entrants were motivated by parental expectations to go into medicine.[10]

Understanding why a particular chiropractic course/college was chosen is another area where the published

evidence is scarce. Many colleges now are providing a variety of education models to attract students, including distance learning for many courses.[11] This is in line with the general desire from government education departments to provide better opportunities for adults to change careers after study.[12] While there has been some opposition within chiropractic education to new delivery styles, they have become more accepted across other professional courses.[13] Opposition to educational change is not unique to chiropractic. In 1999, Davies found that many viewed nontraditional courses as inferior.[14] Flexible learning schemes and specific short courses designed to provide the prerequisite entry qualifications ("Access" courses) are seen as vital to widening participation in higher education and have been particularly successful in attracting mature students.[15–17] It is important to see how students considered features, such as Access courses and mixed-mode delivery in their study, and whether they would not have studied chiropractic if these options were not available.

Mixed-mode courses offer the student the ability to continue working during the course. However, studying mixed-mode or traditional delivery, and being concurrently employed can cause problems. While it offers the benefit of an income to offset fees, it may cause a potential conflict where work and study are competing for the individual's time. Rosser proposed that mixed-mode delivery does appear to make this balance more achievable.[13] She found that 68% of full-time osteopathy students did not work during the course and the remaining 32% only worked part-time. In contrast, 39% of mixed-mode students worked full-time, 42% part-time, and only 19% did not work. With up to five years of study and annual fees of approximately GBP 6000 each year, pursuing a mixed-mode chiropractic course represents a significant personal and financial commitment, with possible adverse consequences. A study by Willets in 2008 found that 50% of mixed-mode chiropractic students who experienced a relationship break-up reported that the course was 25% to 40% responsible for it and 25% said the course was more than 65% responsible.[18]

This aim of our study was to investigate individual motivations for studying chiropractic, particularly whether the "desire to help" was a primary factor, as suggested by Byfield.[8] In addition, the study aimed to show what potential students looked for in a course/college and existing potential barriers to studying chiropractic.

METHODS

The study design was a cross-sectional survey using a self-administered paper questionnaire as the data collection tool. This was chosen because evidence suggests that a paper questionnaire would provide a better immediate response rate than an electronic version.[19,20] The questionnaire was developed according to the principles advised in standard research texts,[21,22] and following a strengths, weaknesses, opportunities, and threat (SWOT) analysis of previous surveys.[23–25] The questionnaire, following recommended practice,[26] collected quantitative data of various data types, but also explored motivations, collecting qualitative data from some free text answers.

Ethical approval for the study was obtained from the MCC Ethics Committee before commencement of the study. The study was done as part of the requirements for the author's chiropractic degree and, as such, the study required no external funding. Following ethical approval, the questionnaire was piloted on a small group of students enrolled in the chiropractic course ($n = 10$), who were asked to complete the questionnaire and provide critical appraisal of the experience, and the questionnaire design, considering areas, such as question format, content, and ease of use (face and content validity). The final questionnaire was modified in the light of feedback from the pilot group, and then distributed to the students enrolled at MCC during July and August 2009.

A sample size calculation was done and showed that a minimum of 119 questionnaires were required from the MCC student population of 171 students to reflect valid results at a confidence level of 95% and confidence interval of 5%.

Current chiropractic students enrolled at the MCC were used as the subjects. The only inclusion criteria were that the subjects had to be current students in one of the following MCC mixed-mode delivery courses – the Access course, 5-year Human BSc (Chiropractic), 5-year Human MChiro degree. All students were supplied with a questionnaire, and an information leaflet explaining the nature and purpose of the study. Members of the MCC administrative staff were supplied with the questionnaires and information letters. These then were distributed to the subject lecturers for onward distribution to the students in their classes. Anonymity of data was stressed (no identifiers were recorded) and consent to participate was implied by virtue of returning a completed questionnaire.

The questionnaires were distributed and completed while the students were in college and then posted into a sealed ballot box sited in the main student common room. The raw data were collated manually into Microsoft Excel spreadsheets (Microsoft Corp, Redmond, WA) for descriptive analysis of the questionnaire results. The qualitative data were reviewed thematically for any common threads in the perceptions of the respondents. Simple descriptive analysis of the data was chosen for this particular study to reflect general attitudes. Limited inferential statistics were done using Instat v3.0 (GraphPad Software, Inc, LaJolla, CA).

Demographic data also were obtained from student admissions records of a similar chiropractic college, the AECC. These data were supplied by staff from the Admissions Office of AECC in a confidential and anonymous format.

RESULTS

A total of 121 (70.8%) completed questionnaires were returned from MCC students.

Student Demographics

The mean student age across all years was 31.1 years (SD 9.6, $n = 119$). The highest age was 58 years and the

lowest was 16 years. The distribution of ages across all college year groups (expressed as a percentage of all respondents, $n = 121$) is given in Table 1. Following recommendations from previous research, narrow age bands have been used.[25] There were 76 (62%) female and 46 (38%) male respondents. Ethnically, the majority of respondents (91%, $n = 109$) were white, 5.0% ($n = 6$) mixed race, 3.3% ($n = 4$) Asian, and 0.8% ($n = 1$) Chinese.

From an academic standpoint at entry to the course, the majority of students (82.6%, $n = 100$) had General Certificates of Secondary Education (equivalent to United States High School graduation), 54.5% ($n = 66$) had Advanced School Certificates (equivalent to United States Advanced Placement examination), and 36.4% ($n = 44$) had university degrees. Also, 17.3% ($n = 21$) of students had National Vocational Qualifications and 19% ($n = 23$) had Higher National certificates or Diplomas (equivalent to United States Apprenticeship Certificates and Diplomas).

Respondents also were asked to categorize their occupation before joining the course using the National Readership Survey (NSR) Social Groups. This is an established social grade classification system based upon the respondent's occupation.[27] Most respondents were in occupations that put them in group B, representing intermediate managerial and administrative staff (35.5%, $n = 43$), or C1, representing supervisory and clerical staff (22.3%, $n = 27$). Group A (higher managerial and professional staff) showed 13.2% ($n = 16$), with lower representation of the skilled and semi-skilled manual groups, C2 (8.3%, $n = 10$) and D (4.1%, $n = 5$), respectively. No respondents were in group E (state pensioners, casual, and lowest grade workers).

The comparator college, AECC, supplied demographic data for all 578 (100%) of its students. Student age ranged from 18 to 45 years (mean 23.3 years, SD 5.1, $n = 578$) with 43.3% (250) under 21 years. Approximately half (50.5%, $n = 292$) of the comparison group were female, the remainder being male. According to UK Ethnic classifications, 86.5% ($n = 500$) were white, 0.3% (2) mixed race, 2.8% (16) Asian, 0.7% (4) black/black British, and 3.5% (20) Chinese/other ethnicity, and for 6.2% (36) the ethnicity was unknown.

Motivations for Studying Chiropractic

The reasons for studying chiropractic are represented in Table 2. The majority of respondents showed clearly that the desire to help others motivated them to become chiropractors, selecting that they had help from chiropractic and they wanted to help others. Of those respondents that selected the "Other" option, most (45%, $n = 8$) planned to use the chiropractic course as an entry qualification into animal chiropractic courses and then work with animals. This was followed by those having a friend or relative who was a chiropractor (33%, $n = 6$).

Respondents were asked to select other courses that they had considered before starting a chiropractic course. Most respondents considered physiotherapy (35.5%, $n = 43$) and this was followed closely by those who had not considered any other course (34.7%, $n = 42$). The next popular choice was osteopathy (32.2%, $n = 39$), followed by conventional medical, dental, or nursing degrees (14.0%, $n = 17$). The remainder was made up of massage (13.2%, $n = 16$), homoeopathy (5.0%, $n = 6$), other complementary and alternative medicine courses (10.7%, $n = 13$), and mental health courses (5.0%, $n = 6$). One respondent had previously considered a nonhealthcare-based course.

What Students Look for in a Course or College

Respondents ranked the importance of features of the course/college from "not important" to "extremely important." The full results are given in Figure 1.

Potential Barriers to Studying Chiropractic

Respondents were asked to select items that would have been barriers to them studying chiropractic. The most significant potential barrier was "not being able to continue working while studying" (73.6%, $n = 89$). Traveling distance to the college and mode of delivery also were potential barriers (50.4%, $n = 61$ and 43.0%, $n = 52$, respectively). A number of students valued the level of the academic qualification, indicating that it would become a barrier if this was lower (33.9%, $n = 41$). Just under a quarter (24.8%, $n = 30$) said that a lack of the Access course would have prevented them studying chiropractic. Funding and college research were considered minor issues (18.2%, $n = 22$ and 12.4%, $n = 15$, respectively).

DISCUSSION

The questionnaire response of 121 (70.8%) from MCC gave a good sample size and the response rate compared well to other surveys.[28] The comparison college, AECC, provided demographic data for all 578 (100%) of its students. The total demographic data then represented 2 of the 3 UK chiropractic colleges, and with a total of 699 subjects, a large proportion of UK chiropractic students. The student demographic at AECC is quite different from that at MCC, with a much higher proportion of students under 21 years of age ($p < .05$). AECC is affiliated with a large UK university and, at the time of the study, is incorporated into the UK university admission system. In comparison, MCC is a private charitable trust institution and, at the time of this study, it was outside this central admissions system. This resulted in MCC's lower student numbers and distribution.

General Student Demographics

The female majority (62.0%) in the MCC questionnaire group is representative of the similar majorities in complimentary medicine (73.2%), medicine and dentistry (58.4%), and higher education overall (57.6%).[29]

Using the age classifications of Baxter and Hatt,[30] the majority (66.9%, $n = 81$) of the MCC questionnaire group were "older matures" (25+), with only 10.7% ($n = 13$) in the "standard" age range (<21). The comparison group had 43.3% ($n = 250$) in the "standard" age range and 24.6% in the "older mature" group. The older profile may explain why the course delivery style and ability to work

Table 1 - Age Distribution for Chiropractic Students in the Study

Age Range	MCC Students % (*n*)	AECC Students % (*n*)
<21	10.7 (13)	43.3 (250)
21–24	19.8 (24)	32.2 (186)
25–28	11.6 (14)	11.6 (67)
29–32	15.7 (19)	6.4 (37)
33–36	14.0 (17)	4.0 (23)
37–40	11.6 (14)	1.4 (8)
41–44	4.1 (5)	1.0 (6)
45–48	2.5 (3)	0.2 (1)
49–52	1.7 (2)	0
>52	5.8 (7)	0
No response	2.5 (3)	0

were so important to the questionnaire respondents. One subtlety to note, however, was that, because of the larger sample size in the comparison group, 24.6% at the AECC still represents a significant number ($n = 142$) of older mature students.

There were no significant differences between the groups in terms of student ethnicity. The proportion of white students in the two groups was significantly higher than the 77.8% found for all UK higher education students,[29] but typical of the historically low nonwhite involvement in chiropractic.[31,32]

Before starting the course, more than half (57.8%, $n = 70$) of the questionnaire students had occupations that put them in socioeconomic groups C1 and B, which together with the ethnicity results echoes the "white, middle-class" perception of chiropractic.[9] The results give credence to previous advice, namely that chiropractic students should learn additional cultural skills to allow them to work with patients from different (nonwhite, middle-class) backgrounds.[33]

Motivations, Choices and Barriers

The results suggested that students were coming to chiropractic to "do" chiropractic, rather than doing the course in lieu of other healthcare or academic courses. This is reflected by the 54.5% ($n = 66$) of students who said that they had chosen chiropractic so that they could help others. In contrast with medical students, very few (2.5%, $n = 3$) had chosen the course because of parental expectations and only 5.8% ($n = 7$) had a parent who was a chiropractor.[10]

In line with the previous findings of Byfield, the most common factor (55.4%, $n = 67$) to have influenced students to study chiropractic was the help they had received previously from chiropractic.[8] With only 13.2% ($n = 16$) of students saying that they had always wanted to be a chiropractor, it is possible that chiropractic treatment influenced the others. In fact 22.3% ($n = 27$) said chiropractic had "changed their life." The results also showed that 44.6% ($n = 54$) of students were attracted by chiropractic's holistic, drugless approach to health, which again is in agreement with the findings of previous work.[9]

Table 2 - Motivation for Undertaking Chiropractic Training

Reason	Frequency % (*n*)
I had always wanted to be a chiropractor	13.2 (16)
I had a relative who was a chiropractor	5.8 (7)
Chiropractic treatment has changed my life	22.3 (27)
I had help from chiropractic treatment	55.4 (67)
I wanted to help others	54.5 (66)
I was attracted by chiropractic's holistic & drug-free approach	44.6 (54)
The potential earnings as a chiropractor attracted me	37.2 (45)
I wanted to be a medical doctor and this seemed the next best thing	3.3 (4)
I was already a healthcare provider and wanted to add to my skills	4.1 (5)
My parents (or others) wanted me to become a chiropractor	2.5 (3)
I believed I was a natural healer	5.0 (6)
Other (please state)	14.9 (18)

Respondents could select more than one option.

Course Delivery

The feature of the course that students most noticeably (55.4%, $n = 67$) viewed as extremely important was the ability to continue working during the course, with very few 3.3% ($n = 4$) considering this unimportant. In fact, the survey showed that 73.6% ($n = 89$) of students may have been prevented from studying chiropractic if they could not continue working during the course. Allied to this, 67.0% ($n = 81$) of students viewed the course delivery as important or extremely important, with only 6.6% ($n = 8$) viewing this as unimportant. Put another way, 43.0% ($n = 52$) said that a lack of this delivery option would have prevented them from studying chiropractic. Lack of education funding was seen as a potential barrier by only 18.2% ($n = 22$), suggesting that students were more interested in being able to work to pay for the course.

Study Limitations

There are a number of recognized limitations to the study. Only students from one college completed the questionnaire. More information could have been obtained by surveying students at all UK chiropractic colleges, but this was difficult to administer using the design model employed here. An option would have been to use an electronic survey, but this may have reduced the response rates. The MCC survey response rate was good, but the study relied upon students being in college to receive and return the questionnaire, so absent students were potentially missed. An alternative would have been to mail the questionnaire directly to students; however, this actually may have yielded a lower response and may have required a budget.

The demographic data received from the AECC was vital, but the project would have benefitted from receiving the equivalent data from the other college to make the data

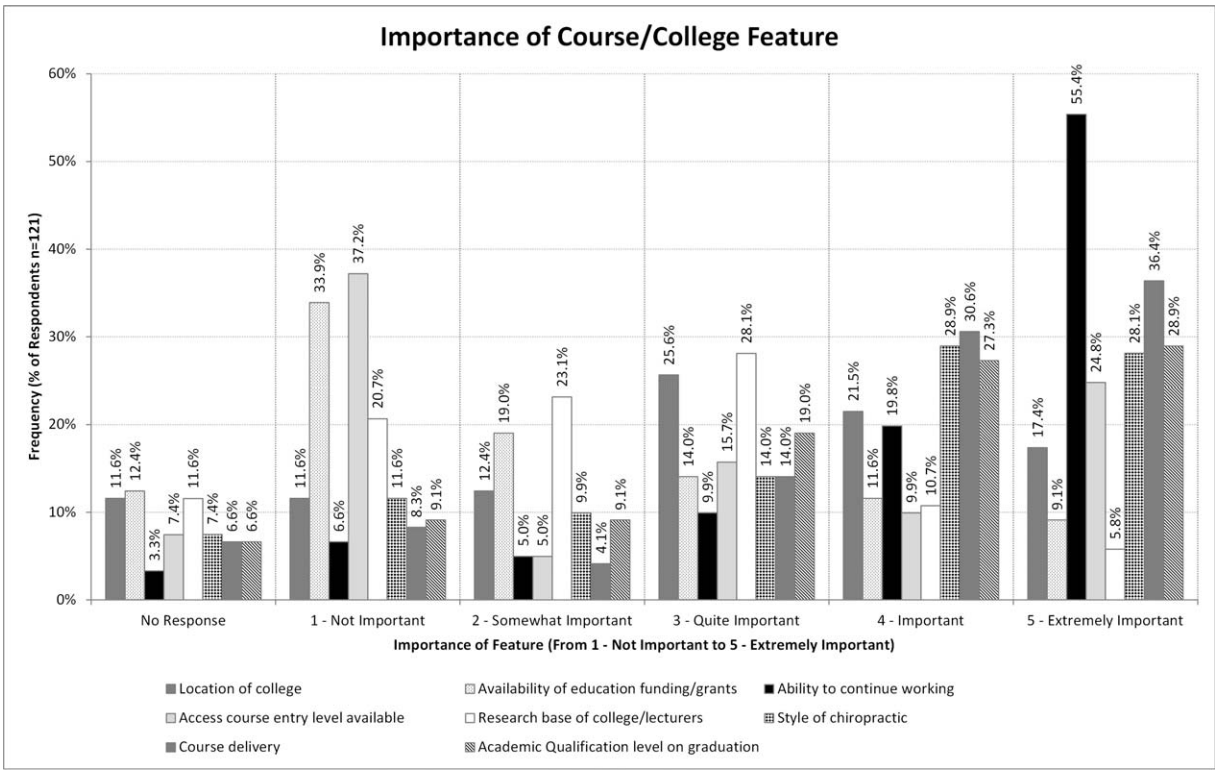

Figure 1 - Importance of the features of the course or college.

more generalizable across UK chiropractic students. The third UK chiropractic college was invited to participate in the study, but no replies were received.

The data analysis highlighted some possible limitations in the questionnaire design. First, the socioeconomic group was inferred from the student's occupation alone before commencement of study, rather than including other data, such as parents' occupation. Also, respondents were asked to consider the motivations/choices they made before starting the course. For some, this required reflecting back over several years, so it is possible that the recollections have been colored by what has happened since that time. It also is possible that allowing respondents to select from a list of motivations influenced their feedback. However, these questions did provide options that allowed the respondent to give their own views. The questionnaire could have relied solely on these, but this would have made it difficult to analyze the data for common themes and also may have led to some questions being left blank by the respondents. Limiting the responses in this way reduced the potential of missing data. Finally, findings are based on a bespoke questionnaire, rather than a recognized and previously validated instrument.

CONCLUSION

The results for motivations, choices, and barriers provided useful insights into what was driving an individual when they decided to study chiropractic at MCC. These traits can be considered by MCC when marketing courses and identifying potential candidates. Chiropractic students surveyed here desired a career where they could help others and many had decided to study chiropractic because of the help they had received from chiropractic treatment. Many also were attracted by chiropractic's holistic, drugless approach to health. The research has shown that many had chosen the course/college as it allowed them to work during the course. This was viewed as extremely important and they may have been prevented from studying chiropractic if this style of delivery had not existed.

CONFLICT OF INTEREST

The authors were either students of or employed by McTimoney College of Chiropractic.

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ceived September 7, 2012, revised December 18, 2012, and accepted January 13, 2013.

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