

---

# Financial Experience, Knowledge, and Attitudes Among Chiropractic Students in College

---

**John Zhang**, M.D., Ph.D., Logan College of Chiropractic, **Ronald Rupert**, D.C., Parker College of Chiropractic, **Dennis Nosco**, Ph.D., and **Rodger Tepe**, Ph.D., Logan College of Chiropractic

**Objective:** To examine personal financial management among chiropractic students to answer three research questions: Do students make reasonable financial choices? How much do they know about investment and financial management? What steps can be taken to improve students' personal financial decisions? **Methods:** This study was conducted through the use of a questionnaire containing 28 questions ranging from demographic factors to factors defining financial success in chiropractic. Students in Logan College of Chiropractic and Parker College of Chiropractic were given the questionnaire with no prior knowledge of the survey to ensure that their responses were spontaneous and reflected their true feelings. Frequency analysis, mean values, and standard deviation were used for the statistical analysis. **Results:** A total of 166 students (36.1% female) from Logan College of Chiropractic and 158 (26.6% female) from Parker College of Chiropractic completed the questionnaire. Most students (58.4% from Logan and 71.5% from Parker) would have a total debt of above \$100,000 after graduation. Most students felt they were not knowledgeable in personal finance management, how to generate significant income from a chiropractic practice, how to generate significant income from investments, and how to use tax strategies. Students agreed that they could be a better doctor and serve patients better if they were financially secure. Most students believed that they would be financially successful as chiropractors. They expressed strong interests in studying strategies for achieving financial success. They also indicated that enrollment in chiropractic college did not prompt them to develop an interest in reading financial news, nor did they receive sufficient information relative to financial success. Most students had an interest in using the strategies if they had training in financial management. Students had no confidence in their current ability to manage the business aspects of a chiropractic office. Only four students out of the 324 thought an income of \$50,000 within 5 years was their goal. Most students had hoped for an annual income between \$100,000 and 250,000 and above plus early retirement. Student had little knowledge of stocks, bonds, and real estate, but one-third of them owned stocks or mutual funds. **Conclusion:** A significant number of chiropractic students reported a lack of knowledge with regard to financial management and investment. Many students had high indebtedness and high projected income after graduation, but they had insufficient knowledge of personal financial management. Many students expressed strong interest in learning financial management, investment, and tax strategies at chiropractic colleges. (*The Journal of Chiropractic Education* 17(2): 120-125, 2003)

Key words: chiropractic, financial management, income, questionnaires, students

## INTRODUCTION

In recent years, declining applicant pools in medical schools and decreased enrollment in chiropractic

colleges have caught the attention of educators and researchers in both camps (1-4). The main reasons given for declining applicant pools in medical schools have been reduced income and loss of autonomy. Recent studies have clearly indicated that income for doctors are on the downtrend (2,5). A survey conducted by *Medical Economics*, a medical business journal, showed a decline in gross and net annual income of many American medical doctors in 1999.

---

### The Journal of Chiropractic Education

Copyright © 2003 the Association of Chiropractic Colleges  
Vol. 17, No. 2. Printed in U.S.A.  
1042-5055/\$4.00

Compared with 1998, the median gross revenue for internists fell by 6.4% and for family practitioners by 3.2%. Net income fell even more for internists at 10.5% and for family practitioners at 7% (2). It was reported that income is also an important independent predictor of career satisfaction (5). It is not clear that the decreased enrollment in chiropractic institutions is due to declining income. There are limited studies on financial success in the chiropractic profession (4,6). Contrary to the downward trend of income, the cost of chiropractic education has been increasing. In order to keep up with inflation, maintenance, and improvement of facilities, tuition rarely has decreased in chiropractic colleges. The increased cost of education and uncertainty of potential income eventually factor into a potential student's career plan. Today, very few potential students can afford to enroll in an institution without considering the economic consequences.

Despite the fact that chiropractic colleges were never intended to be schools of economic or business management, students could benefit from knowing more about financial management and investment when they start to establish their practice, especially when facing a tough economic environment. Can chiropractic schools provide better education for their students in business management, financial management, and investment? Do students have any interest in such programs in addition to their full load of chiropractic classes? How much do we know about our current education system and how much do our students know about financial success? To answer those questions, two chiropractic colleges worked jointly on this survey to determine students' understanding of their financial issues.

The purpose of our study was to examine personal financial management among chiropractic students to answer three research questions: "Do students make reasonable financial choices?"; "How much do they know about investment and financial management?"; and "What steps can be taken to improve students' personal financial decisions?".

## METHOD

A 28-question survey regarding financial success was designed to be versatile enough to be used by two chiropractic colleges. All survey participants were instructed to answer the questions with their true feelings. The survey would be anonymous and

confidential. Students had the right to refuse to answer any of the survey questions.

The questionnaire contained four demographic, two yes/no, five multiple-choice, and 16 Likert-type questions (7,8) and an area for comments. The Likert questions dealt directly with student's expectations of postgraduate financial success in office management, financial management, and investment and the rest with miscellaneous financial issues such as student debt, the current financial educational program at the college, and future improvement in financial and investment courses. Each Likert question presented seven possible choices. Choice 1 indicated strong positive feelings toward the item. Choice 4 was treated as a neutral response. Choice 7 represented strong negative feelings toward the item. The percentages of negative and positive feelings were determined based on the student's selection of 1 to 7 and a mean value of the seven choices was calculated. The mean value was taken as an indication of overall response of a student toward a particular question. Questionnaires were administered to students during classes by their professors so as not to introduce bias.

Data were analyzed descriptively for frequency, mean, and standard deviation. Trends with age and gender were also considered. All paper survey questions and comments were entered and stored in Excel spreadsheet and transferred into SPSS 10.0 statistical analysis program (Chicago, SPSS Inc, 1999), for statistical analysis.

## RESULTS

A total of 324 students (166 from Logan College of Chiropractic and 158 from Parker College of Chiropractic) completed the questionnaire. Among all the students, there were 114 first-year students, 120 second-year students, and 90 third-year students. About 50% of the students were between 20 and 25 years old and only 7% above 36 years old from Logan and 16% from Parker (Table 1). Age had little influence on the chiropractic students feeling toward financial success. Gender had no effect on student's attitude toward the survey questions. Among all the students who completed the survey, 194 individuals (59.9%) indicated that they were single (Table 2) and only 24 (7.4%) were married and had more than two children (Table 2). Most students (58.4% from Logan and 71.5% from Parker) will have a total debt of above \$100,000 including student and personal

**Table 1. Age Distribution Among Students from Two Chiropractic Colleges**

Age	Logan			Parker		
	Total	Frequency	Percent	Total	Frequency	Percent
20–25	166	83	50	158	77	48.7
26–30	166	50	30.1	158	49	31.0
31–35	166	22	13.3	158	15	9.5
36–40	166	4	2.4	158	8	5.1
41–45	166	5	3.0	158	8	5.1
51 up	166	2	1.2	158	0	

**Table 2. Family Status of Students from Two Chiropractic Colleges**

Family Status	Logan			Parker		
	Total	Frequency	Percent	Total	Frequency	Percent
Single	166	98	59.0	158	96	60.8
Single 1 c	166	6	3.6	158	5	3.2
Single 2 c up	166	1	0.6	158	1	0.6
Married 0 c	166	35	21.1	158	31	19.6
Married 1 c	166	15	9.0	158	12	7.6
Married 2 c up	166	11	6.6	158	13	8.2

C, child or children.

**Table 3. Data Collection from Years of Education at Logan and Parker**

Year	Logan			Parker		
	Total	Frequency	Percent	Total	Frequency	Percent
1	166	55	33.1	158	59	37.4
2	166	65	40.0	158	55	34.8
3	166	46	26.9	158	44	27.8

**Table 4. Total Debt at Graduation of Students from Two Chiropractic Colleges**

Debt	Logan			Parker		
	Total	Frequency	Percent	Total	Frequency	Percent
<\$30,000	166	12	7.2	158	5	3.2
\$30,000–\$50,000	166	9	5.4	158	7	4.4
\$50,000–\$100,000	166	48	28.9	158	33	20.9
Above \$100,000	166	97	58.4	158	113	71.5

loans (Table 4). Most felt they were not knowledgeable in personal finance management (Table 5, Q6A), did not know how to generate significant income from a chiropractic practice (Table 5, Q6B), and did not know how to generate significant income from investments (Table 5, Q6C) and tax strategies (Table 5, Q6D). Students agreed that they could be better doctors and serve patients better if they

are financially secure (Table 5, Q7). Most students believed that they would be financially successful as chiropractors (Table 5, Q8). They expressed strong interests in studying strategies for achieving financial success (Table 5, Q9). They also indicated that enrollment in chiropractic college did not prompt them to develop an interest in reading financial news (Table 5, Q11), nor did they believe they

**Table 5. Mean and Standard Deviation of the Likert Survey Questions**

	Logan			Parker		
	Total	Mean	SD	Total	Mean	SD
AGE	166	24.6	6.0	158	24.8	6.0
Q6A	166	4.3	1.8	158	4.1	1.8
Q6B	166	5.8	1.6	158	5.4	1.7
Q6C	166	5.3	1.7	158	5.0	1.9
Q6D	166	5.7	1.7	158	5.5	1.7
Q7	166	2.3	1.6	158	2.0	1.7
Q8	166	1.7	1.1	158	1.4	1.0
Q9	166	1.8	1.2	158	1.7	1.3
Q10	166	4.8	1.9	158	4.3	2.0
Q11	166	5.1	1.7	158	4.8	1.9
Q12	166	5.8	1.5	158	5.4	1.6
Q13	166	5.7	1.5	158	5.2	1.8
Q14	166	2.1	1.5	158	2.3	1.7
Q15	166	4.8	1.9	158	4.4	2.0
Q17	166	4.5	1.8	158	3.9	1.8
Q20	166	5.1	1.8	158	4.9	2.0
Q21	166	5.1	2.0	158	4.9	2.2
Q23	166	1.9	1.4	158	1.9	1.5
Q24	166	2.5	1.8	158	2.5	1.9
Q25	166	1.5	1.0	158	1.5	1.1

Q, Question.

**Table 6. Student's Goal of Financial Success from the Two Chiropractic Colleges**

Debt	Logan			Parker		
	Total	Frequency	Percent	Total	Frequency	Percent
A. \$50,000	166	3	1.8	158	1	0.6
B. \$100,000	166	54	32.5	158	32	20.3
C. \$250,000	166	53	31.9	158	50	31.7
D. Above \$250,000	166	29	17.5	158	41	26.0
E. Early retirement	166	23	13.9	158	30	19.0
B & C	166			158	1	0.6
A & D & E	166	1	.7	158	1	0.6
B & E	166	2	1.2	158		

had received sufficient information about financial success (Table 5, Q12 and Q13). Most students had an interest in pursuing the strategies if they had training in financial management (Table 5, Q14). Students had no confidence in their current ability to manage the business aspects of a chiropractic office (Table 5, Q15). Only four students out of the 324 thought an income of \$50,000 within 5 years was their goal. Most students had goals for an annual income between \$100,000 and \$250,000 or more plus early retirement (Table 6). Student had little knowledge in stocks, bonds, and real estate

(Table 5, Q20), but one-third of them owned stocks and mutual funds (Table 7). Results from both chiropractic colleges were very similar and comparable.

## DISCUSSION

Our first research question was related to whether chiropractic students make reasonable financial choices. Are they making the right choices? Obviously, they all made the right decision to study chiropractic as their chosen profession. Unfortunately the cost

**Table 7. Investments Owned by Students**

	Logan			Parker		
	Total	Frequency	Percent	Total	Frequency	Percent
IRA	166	20	12.1	158	24	15.2
Roth IRA	166	18	10.8	158	14	8.9
Stocks	166	46	27.7	158	50	31.7
Bond	166	31	18.7	158	28	17.7
Mutual fund	166	56	33.7	158	48	30.4
Real estate	166	24	14.5	158	32	20.3
Life insurance	166	63	38.0	158	54	34.2
Interest checking	166	83	50	158	70	44.3
Savings account	166	118	71.0	158	112	70.9
Bank CD	166	37	22.3	158	33	20.9

is high as it carries a projected personal debt of more than \$100,000 for 58.4% Logan and 71.5% Parker students. On the other hand, this debt could be viewed as the biggest investment in their life for 95% of students projected an annual income of \$100,000 or more within 10 years in practice. Despite the limited financial resources for this group of chiropractic students, about 30% of them had made investments in stocks, bonds, mutual funds, and bank CDs. About 12–15% of the students had retirement accounts such as an IRA or Roth IRA. Most significantly, the majority of students were interested in learning more about financial management, office management, and investments while in chiropractic college despite a full load of chiropractic courses. There were many studies on career success (9–15) but few of them focused on the financial aspect of success in their chosen profession.

How much do our students know about investment and financial management? They indicated that they had very limited knowledge in all aspects of financial management and investments. This actually presented an opportunity for educators in chiropractic colleges to provide early education in financial management and investment for the student population so that they will learn how to avoid financial difficulties in their practice after graduation. In today's business, economic, and investment environment, knowing only that one can treat one's patients with good hands-on skill and put money into the stock market and real estate market are not sufficient. From the survey, it was clear that all students anticipate a high income as a chiropractor. It was also clear that as students, they have a limited understanding of how to run a chiropractic office, how to manage personal finance, and how to invest. Their high financial aspirations coupled with poor financial

and business skills may potentially set them up for failure despite a high level of diagnostic and treatment skills.

What steps can be taken to improve students' personal financial decisions? The logical answer to this question is providing a sufficient education in business and finance to all chiropractic students, systematically teaching them how to manage a chiropractic office, manage personal finance, and invest. Students seemed to agree with this assessment and many of them expressed willingness to study the additional courses during their education program. In addition to financial management and investment information, some students expressed interest in knowing more about the legal aspects of finance and a chiropractic practice.

The most significant strength of the study was the relatively large sample size and its source. Collecting survey questions from two distant chiropractic colleges minimizes bias from a single sample population. Another strength was that the survey in each chiropractic college covered students from the first year up to the third year of their education.

## CONCLUSION

A significant number of chiropractic students reported a lack of knowledge with regard to financial management and investment. Many students had high indebtedness and high projected income after graduation, but they had insufficient knowledge of personal financial management. Many students expressed strong interest in learning financial management, investment, and tax strategies at chiropractic colleges.

---

**Received**, January 29, 2003

**Revised**, October 13, 2003

**Accepted**, October 20, 2003

**Address correspondence to:** John Zhang, Research Department, 1851 Schoettler Road, Chesterfield, MO 63006; e-mail: jzhang@logan.edu.

## REFERENCES

1. Cohen JJ. Our compact with tomorrow's doctors. *Acad Med* 2002;77(6):475-480.
2. Charatan F. US doctors' incomes fell in 1999. *BMJ* 2000;321(7272):1309.
3. Chaix-Couturier C, Durand-Zaleski I, Jolly D, Durieux P. Effects of financial incentives on medical practice: results from a systematic review of the literature and methodological issues. *Int J Qual Health Care* 2000;12(2):133-142.
4. Zhang Q, Wiegand R, Nosco D. Chiropractic success survey. *J Chiropr Educ* 2002;16(2):128-135.
5. Stoddard JJ, Hargraves JL, Reed M, Vratil A. Managed care, professional autonomy, and income: effects on physician career satisfaction. *J Gen Intern Med* 2001;16(10):675-684.
6. National Board of Chiropractic Examiners. *Job Analysis of Chiropractic*. Greeley, CO: Author, 2000.
7. Laurent A. Effects of question length on reporting behavior in the survey interview. *J Am Stat Assoc* 1972;67:298.
8. Portney LG, Watkins MP. Surveys. In: *Foundations of Clinical Research: Applications to Practice*. Norwalk, CT: Appleton & Lange, 1993;251-269.
9. Buckley LM, Sanders K, Shih M, Hampton CL. Attitudes of clinical faculty about career progress, career success and recognition, and commitment to academic medicine. Results of a survey. *Arch Intern Med* 2000;160(17):2625-2629.
10. Heath TJ, Lynch-Blosse M, Lanyon A. A longitudinal study of veterinary students and recent graduates. 1. Backgrounds, plans and subsequent employment. *Aust Vet J* 1996;74(4):291-296.
11. Rozier CK, Raymond MJ, Goldstein MS, Hamilton BL. Gender and physical therapy career success factors. *Phys Ther* 1998;78:690-704.
12. Kassner MW. Attributions about subjectively defined career success in different occupations. *J Business Psychol* 1990;5:37-46.
13. Gattiker UE, Larwood L. Predictors for managers' career mobility, success, and satisfaction. *Human Relations* 1988;41:569-591.
14. Keown A, Keown C. Factors of success for women in business. *Int J Women's Stud* 1985;8:278-285.
15. Seibert SE, Crant JM, Kraimer ML. Proactive personality and career success. *J Appl Psychol* 1999;84(3):416-427.
16. Peluchette JVE. Subjective career success: the influence of individual difference, family, and organizational variables. *J Vocational Behav* 1993;43:198-208.
17. Teichman JM, Bernheim BD, Espinosa EA, Cecconi PP, Meyer J, Pearle MS, Preminger GM, Leveillee RJ. How do urology residents manage personal finances? *Urology* 2001;57(5):866-871.
18. Rupert RL. A survey of practice patterns and the health promotion and prevention attitudes of US chiropractors. Maintenance care: part I. *J Manipulative Physiol Ther* 2000;23(1):1-9.