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# Chiropractic Success Survey

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The purpose of the study was to investigate important factors that affect alumni feelings on career success in chiropractic. This study was conducted through the use of a questionnaire containing 31 questions ranging from demographic factors to factors defining career success in chiropractic. Alumni attending an annual meeting 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, standard deviation, and analysis of variance (ANOVA) were used for the statistical analysis. A total of 86 alumni (80% male, 20% female, representing 2.1% of the alumni population) completed the questionnaire. Their ages ranged from 25 to 77 years with an average of 48.1 years. Both male and female alumni selected altruistic indicators rather than high income or status as most important factors in career success. High income was ranked as only mildly important (an average of 2.59 on a scale of 1–5), although among the 86 subjects, 24.7% reported an income between \$50,000 and \$100,000, 18.8% between \$100,000 and \$150,000, and 31.8% more than \$150,000. The other 23.7% had income below \$30,000 a year or did not answer the question. Internal indicators such as practicing ethically, improving patients' health, deriving personal satisfaction, and achieving personal goals were considered more significant in career success than external factors represented by items such as high income, attaining executive status, and being an important alumnus. The five most important factors for success were defined as being a good spouse or parent, ethical practice, improvement of patient health, personal satisfaction from career, and latitude in handling work-related responsibilities. This information is useful for understanding alumni feelings toward career success in chiropractic practice and further research may improve chiropractic education to enhance career success. Gender and age did not appear to influence attitudes toward chiropractic success. High income was not considered very important for career success but it was noted that this group of alumni had high income. (The Journal of Chiropractic Education 16(2): 128–135, 2002)

Key words: career, chiropractic, success, survey

## INTRODUCTION

Career success has been studied in different disciplines in medicine (1–5), physical therapy (6,7), and business (8–10), but has been limited to only one aspect of career success in these studies such as selecting specialties in the medical profession. We have found that the Rozier study (7) is the

closest to the purpose of this study to define career success in the chiropractic profession. The career success issue has been researched in chiropractic in varying forms to understand what is success in chiropractic (11). An extensive survey on the job analysis of chiropractic has detailed many aspects of chiropractic success issues (11). It includes information on the typical chiropractor, chiropractic patients, chiropractic adjustments performed by chiropractors, chiropractors' income, and many others. All those works laid the foundation for this study. However, when it comes to defining career success, the picture is blurred and is often dependent on whom you

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asked the question (12). Chiropractors may have different definitions of career success because of variations in patient contact, types of chiropractic practice, clinical skills, personal experience, and family. There are always the obvious indicators of career success, such as wealth, prestige, and power. It is misleading to use a narrow standard of salary or position to measure career success because career success appears to be determined by multiple internal and external factors (7). It has been demonstrated in career success research that internal indicators are also considered important (7). Interventions to enhance career success in chiropractic will be improved if the definition of success is clear. This will also help to establish benchmarks for all future chiropractic students to follow or for institutions to improve curricula.

Career success issues are important to the well-being of individual doctors and to the advancement of the chiropractic profession. If chiropractors feel successful, there may be less risk of their leaving the profession or changing practice location because they are likely to be more motivated, more productive, and enjoying their practices (13). A successful chiropractor with a positive feeling toward his or her practice may be more willing to refer students to chiropractic colleges. With the recent enrollment concerns in chiropractic colleges, it is important to know the feelings of our alumni toward career success in chiropractic. This survey may provide helpful information in the recruitment process to assist the potential chiropractic students to adjust their perception of success in a chiropractic career. Students with realistic goals or perceptions of success may formulate more successful strategies toward those goals and may be less likely to be discouraged by short-term difficulties.

The purpose of our study was to investigate the attitude of chiropractic college alumni about perceptions of career success. We explored factors that define career success and those that enhance or inhibit success. Our research questions were the following:

1. Are there gender and age differences in perception of career success?
2. Are high income and prestige important factors in career success?
3. Overall, what were considered the most and least important indicators of career success?

Although this study is investigating the perceptions of chiropractors in career success, it is our

hope that a follow-up study will address the factors that contribute to career success in the chiropractic profession.

## METHODS

Alumni of a chiropractic college attending an annual meeting were asked to participate in this study. A research booth was present in a hotel where continuing education seminars were being held. Career success surveys were given to alumni who either passed by the booth or approached the booth for research information. Alumni were instructed to return the completed survey the same day or by the next day. It was clearly stated in the survey that alumni had the right to refuse to answer any of the survey questions.

This questionnaire consisted of Likert scale questions (14,15) concerning career success in chiropractic along with demographic questions. The questionnaire was adopted and modified from the study by Rozier et al. on the career success of physical therapists (7). Modifications of Rozier's survey were made to suit the chiropractic profession (Table 1). The questionnaire asked alumni to indicate their feelings about career success and the factors that affect their feelings toward career success, such as satisfaction of chiropractic practice and income. Each question presented five responses. Choice 1 indicated strong positive feelings toward the item. Choice 3 was treated as a neutral response. Choice 5 represented strong negative feelings toward the item. The percentages of negative and positive feelings were calculated based on the choice of 1–5 and a mean value of the five choices was calculated. The mean value was taken as an indication of overall response of alumni toward a particular question.

The career success of male versus female alumni was studied. An analysis of variance was performed to determine if there were any differences due to gender. The same analysis was also used to examine differences in perceptions relative to age.

All data collected were stored into an Excel spreadsheet and transferred into SPSS 10.0 statistical analysis program (Chicago, SPSS Inc, 1999). Analysis was performed on the total data file and then separated by gender and age. Descriptive statistics were derived for all items. Analysis of variance was used to test the differences of the gender and age groups. All statistical tests were considered significant at the  $p < .05$  level.

**Table 1. Comparison of the Modified Questionnaire with the Original One Used by Rozier et al.**

Our career success survey questions	Original questions used by Rozier et al. (7)
Improvement of patient health	Improvement of patient health
Achievement of personal career goals	Achievement of personal career goals
Recognition as a professional by other health care professionals	Recognition as a professional by other health care professionals
Recognition as a professional by patients and other members of the public	Recognition as a professional by patients and other members of the public
Respect from other chiropractors	Respect from other physical therapists
–	Achievement of supervisory status
–	Attainment of executive position
–	Employment in a full-time position
–	Receipt of substantial employment benefits
Respect for contributions to improve the profession	Respect for contributions to improve the profession
Ownership of your chiropractic practice	–
Ownership of more chiropractic offices	–
Balance of professional role with family life	Balance of professional role with family life
Personal satisfaction from providing chiropractic care	Personal satisfaction from career
High income	High income
Important alumnus	–
Advancement of knowledge/skills through continuing education	Advancement of knowledge/skills through continuing education
Advancement of knowledge through higher education	Advancement of knowledge through higher education
Advancement of others' knowledge through publication and research	Advancement of others' knowledge through publication and research
Achievement of certification as a clinical specialist	Achievement of certification as a clinical specialist
Provision of free services or services at reduced fees	Provision of free services or services at reduced fees
Participation in professional association activities	Participation in professional association activities
Appointment or election to a leadership position in a professional association	Appointment or election to a leadership position in a professional association
Ethical practice	Ethical practice
Public service and volunteer work	Public service and volunteer work
Challenge provided by work environment	Challenge provided by work environment
A good husband, wife, or parent	A good husband, wife or parent
Latitude in handling work-related responsibilities	Latitude in handling work-related responsibilities

## RESULTS

A total of 125 alumni attended this annual alumni meeting, with 86 (80% male, representing 68.8% of attending alumni and 2.1% of the alumni population of a chiropractic college) completing the questionnaire. Their ages ranged from 25 to 77 years old with an average of 48.1 years. Age had little influence on the chiropractic success survey results, except in the question addressing owning a chiropractic office (Table 2). Older chiropractors rated this question as more important than young chiropractors (1.6:3.0). Gender had no effect on alumni's attitude toward the survey questions (Table 3). Among all

the alumni who had returned the survey, 79 individuals (91.9%) indicated that they were still active in chiropractic practice and four selected either retired or not in inactive practice (the remainder did not answer the question). When asked about whether or not they were using insurance or were in a cash practice, 66 of the responders selected cash practice, 13 selected a combination of cash and insurance, and only one selected all insurance. Both genders selected indicators such as being a good husband, wife, or parent; practicing ethically; improving patient health; and feeling satisfied over high income or status when describing career success (Table 4). High income was ranked

**Table 2. Effects of Age on Different Questions**

Question topics	Mean at ages:				
	<30	31-40	41-50	51-60	61 up
Improvement of patient health	1.0	1.1	1.1	1.0	1.2
Achievement of personal career goals	1.5	1.5	1.9	1.55	1.9
Recognition as a professional by other health care professionals	1.3	2.5	2.5	2.1	2.2
Recognition as a professional by patients and other members of the public	1.3	1.7	1.8	1.5	1.7
Respect from other chiropractors	2.3	2.5	2.5	2.3	1.8
Respect for contributions to improve the profession	2.0	2.4	2.0	2.0	1.8
Ownership of your chiropractic practice	3.0	2.3	2.1	1.4	1.6
Ownership of more chiropractic offices	4.0	3.6	4.2	4.1	4.1
Balance of professional role with family life	1.0	1.3	1.2	1.3	1.8
Personal satisfaction from providing chiropractic care	1.0	1.2	1.1	1.1	1.4
High income	2.5	2.5	2.8	2.2	2.4
Important alumnus	3.5	3.4	3.4	2.8	3.0
Advancement of knowledge/skills through continuing education	2.3	2.2	1.8	1.8	2.1
Advancement of knowledge through higher education	2.5	2.2	2.3	2.1	2.8
Advancement of others' knowledge through publication and research	1.5	1.7	2.0	2.0	2.2
Achievement of certification as a clinical specialist	3.8	3.0	3.0	2.2	2.6
Provision of free services or services at reduced fees	3.0	2.8	3.3	3.1	3.7
Participation in professional association activities	3.0	2.4	2.5	2.4	2.2
Appointment or election to a leadership position in a professional association	3.8	3.3	3.7	2.5	3.0
Ethical practice	1.0	1.0	1.1	1.0	1.2
Public service and volunteer work	2.3	2.3	2.1	1.9	2.1
Challenge provided by work environment	1.5	2.0	2.0	1.6	1.9
A good husband, wife, or parent	1.0	1.2	1.1	1.0	1.1
Latitude in handling work-related responsibilities	1.0	1.2	1.4	1.6	1.4

an average of 2.59 on a scale from 1 to 5; 24.7% alumni surveyed reported an income of between \$50,000 and \$100,000, 18.8% with income between \$100,000 and \$150,000, and 31.8% with income more than \$150,000. The least important factors in career success considered by the alumni were ownership of more chiropractic offices, appointment or election to a leadership position, being an important alumnus, and provision of free services or services at reduced fees (Table 4). Alumni were asked to indicate how successful they perceived themselves to be on a scale of 1 (very successful) to 5 (very unsuccessful). Overall, 43.5% of the alumni considered themselves to be very successful and 37.6% reported that they were successful. Only 4.7% reported themselves to be very unsuccessful and 8.2% reported that they were unsuccessful. Among the four alumni reporting that they were very unsuccessful, two had

an income between \$50,000 and \$100,000 and two below \$30,000.

## DISCUSSION

Our first research question concerned possible gender and age differences in career success. Gender was not a factor that affected alumni attitudes toward career success (Table 3), as none of the *F* values were near the significant level of  $p < .05$ . Although being a good spouse or parent was ranked first on overall scores, female respondents rated the question lower (4th) than did males (1st). This may reflect working women's views on family and career success in the chiropractic profession. Females also felt that being an important alumnus was less important than males did. It was noted that the total

**Table 3. Effects of Gender on Different Questions**

Question topics	Male			Female			<i>F</i>
	<i>N</i>	Mean	<i>SD</i>	<i>N</i>	Mean	<i>SD</i>	
Improvement of patient health	65	1.14	.46	17	1.06	.24	.465
Achievement of personal career goals	63	1.75	.90	17	1.76	.75	.006
Recognition as a professional by other health care professionals	66	2.41	1.25	17	2.18	.88	.518
Recognition as a professional by patients and other members of the public	65	1.69	.79	17	1.76	.56	.724
Respect from other chiropractors	65	2.40	1.33	17	2.06	1.14	.337
Respect for contributions to improve the profession	65	2.03	.93	16	2.25	1.13	.651
Ownership of your chiropractic practice	63	1.90	1.20	17	2.29	1.49	1.267
Ownership of more chiropractic offices	63	3.92	1.30	17	4.29	1.21	1.137
Balance of professional role with family life	65	1.32	.66	17	1.47	1.01	.528
Personal satisfaction from providing chiropractic care	65	1.18	.46	17	1.12	.33	.311
High income	64	2.53	.87	17	2.82	1.07	1.365
Important alumnus	66	3.23	1.29	17	3.47	1.42	.464
Advancement of knowledge/skills through continuing education	66	1.97	1.02	17	2.00	.94	.012
Advancement of knowledge through higher education	65	2.45	1.37	17	2.71	1.36	.455
Advancement of others' knowledge through publication and research	66	1.86	.82	16	2.25	.93	2.709
Achievement of certification as a clinical specialist	65	2.80	1.28	17	3.06	1.20	.567
Provision of free services or services at reduced fees	66	3.27	1.27	17	3.12	.99	.218
Participation in professional association activities	66	2.39	1.18	17	2.65	1.54	.550
Appointment or election to a leadership position in a professional association	66	3.21	1.43	17	3.75	1.39	1.840
Ethical practice	66	1.14	.60	17	1.00	.00	.856
Public service and volunteer work	66	2.21	1.12	17	1.88	.70	1.341
Challenge provided by work environment	62	1.84	.73	17	2.00	.94	.576
A good husband, wife, or parent	62	1.08	.33	17	1.18	.73	.626
Latitude in handling work-related responsibilities	64	1.30	.66	17	1.35	.49	.107

number of female alumni was much smaller than the number of male participants in this study. Similarly, age played a minimal role in the perception of chiropractic career success. The only noticeable difference was the question regards to ownership of a chiropractic office, with older chiropractors considering this more important than young chiropractors.

The importance seemed to escalate chronologically until retirement.

High income was not considered by the alumni as very important in career success. High income was ranked 19th out of the 24 questions in the study. This ranking was somewhat lower than that found in a study of physical therapists who ranked

**Table 4. Rank Order of Items Important for Describing Career Success**

Question topics	Rank		
	All	Male	Female
Being a good husband, wife, or parent	1	1	4
Ethical practice	2	2	1
Improvement of patient health	3	2	2
Personal satisfaction from career	4	3	3
Latitude in handling work-related responsibilities	5	4	5
Balance of professional role with other roles and responsibilities	6	5	6
Recognition as a professional by patients and other members of the public	7	6	7
Achievement of personal career goals	8	7	7
Challenge provided by work environment	9	8	9
Advancement of others' knowledge through publication and research	10	9	12
Advancement of knowledge through continuing education	11	11	9
Ownership of your chiropractic practice	12	10	13
Respect contributions to improve the profession	13	12	12
Public service and volunteer work	14	13	8
Respect from other chiropractors	15	15	10
Recognition as a professional by other health care professionals	16	16	10
Participation in professional association activities	17	14	14
Advancement of knowledge/skills through higher education	18	17	15
High income	19	18	16
Achievement of certification as a clinical specialist	20	19	17
Provision of free services or services at reduced fees	21	22	18
Important alumnus	22	21	19
Appointment or election to a leadership position in a professional association	23	20	20
Ownership of more chiropractic offices	24	23	21

A mean value of 1 indicated a strong positive feeling and a mean value close to 5 indicated a strong negative feeling. Rank order may not equal the number of questions because there may be two or more different questions with the same rank.

high income 13th out of the 23 questions (7). Male chiropractors ranked the importance of high income as 18th of 24 and females ranked it at 16th. Although the importance of high income was ranked slightly higher in the female respondents, male chiropractors actually had a lower average score of 2.53 than the average female score of 2.82. This suggested that there were no differences in attitude toward income in career success between male and female chiropractors. It was noted that the chiropractors in this study had rather high income (18.8% with income between \$100,000 and \$150,000, and 31.8% with income more than \$150,000). The importance of high income as an

indicator for career success may be diminished in this population because they had achieved high income. This result does not exclude high income as a motivating factor for newly graduated chiropractors. In fact, it was noted in the survey that two low-income (below \$30,000/year) alumni considered themselves unsuccessful.

Providing services either free or at a reduced fee was ranked very low by both male and female chiropractors. It is possible that some newly opened chiropractic offices use low-cost service for recruiting new patients to expand practice. It was unknown to the authors what population of chiropractors routinely provide free or reduced fee service in their

chiropractic care. However, the survey respondents in this study disagree that chiropractors should provide services either free or at a reduced fee. The reason behind the disagreement was not clear but it is possible that the survey respondents did not consider low-cost service as a viable solution to attract more patients and their success was not achieved through low-cost practice. This survey did not explore the relationship of patient visits and chiropractic career success. Since the importance of patient visits tied closely to a doctor's style of practice and potential income, it would be interesting to do further research in this area.

In this survey, ownership of more chiropractic offices was ranked the lowest by both female and male participants. Respondents did not regard having more offices as a strong indicator of career success. This may parallel the reported low importance of high income as more offices could easily be considered a sign of wealth. As mentioned above, ownership of one chiropractic office was considered very important for the older chiropractors as part of their career success.

The most obvious limitation of this study was the small sample size. This small group of subjects may not represent the alumni population as a whole. Statistically 2.1% is a good sample size for an intended population. The current U.S. Population Survey monitors 50,000 occupied households every month (16). The average household size is 2.65 in the United States in 1996 (16). Therefore, the survey targeted population is less than 150,000 which is much less than 0.1 % the entire U.S. population. It appeared that our study with 2.1% of total alumni population might give a good representation for the intended study population. Unfortunately, the sample population was a selected group of people who came for an annual meeting rather than randomly selected from the entire alumni population. As observed in the study, there were only four alumni who reported themselves as being very unsuccessful. The true unsuccessful rate might be higher if a random alumni sample had been selected. Another limitation presented in the study was the validity of the survey instrument. Although it has been used by other researchers and questions were very similar (Table 1), we did not perform a validity test before the study. All these limitations clearly influence the strength and generality of the data. As this is a pilot study, further research will be conducted with a larger sample size and all subjects will be selected randomly.

## CONCLUSIONS

Chiropractors in this survey associated internal indicators such as practicing ethically, improving patients' health, deriving personal satisfaction, and achieving personal goals as more significant in career success than external factors represented by items such as high income, attaining executive status, and being an important alumnus. Most chiropractors surveyed described themselves as successful. The five most important factors for success were defined as being a good spouse or parent, ethical practice, improvement of patient health, personal satisfaction from career, and latitude in handling work-related responsibilities. This information is useful for understanding alumni feelings toward career success, but further research is needed to improve chiropractic education to enhance career success.

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## REFERENCES

1. 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.
2. 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.
3. Colletti LM, Mulholland MW, Sonnad SS. Perceived obstacles to career success for women in academic surgery. *Arch Surg* 2000;135(8):972-977.
4. Seibert SE, Crant JM, Kraimer ML. Proactive personality and career success. *J Appl Psychol* 1999;84(3):416-427.
5. Neacy K, Stern SA, Kim HM, Dronen SC. Resident perception of academic skills training and impact on academic career choice. *Med Educ* 2001;35(6):537-543.
6. O'Rourke KD. Success and self-esteem: what women think of themselves determines their career paths. *Phys Ther Today* 1995;18:22-25.
7. Rozier CK, Raymond MJ, Goldstein MS, Hamilton BL. Gender and physical therapy career success factors. *Phys Ther* 1998;78:690-704.
8. Kassner MW. Attributions about subjectively defined career success in different occupations. *J Business Psychol* 1990;5:37-46.
9. Gattiker UE, Larwood L. Predictors for managers' career mobility, success, and satisfaction. *Hum Relations* 1988; 41:569-591.
10. Keown A, Keown C. Factors of success for women in business. *Int J Women's Stud* 1985;8:278-285.

11. National Board of Chiropractic Examiners. Job Analysis of Chiropractic, Greeley, CO, 2000.
12. Hofer SM, Stallings MC, Reynolds CA, et al. What criteria define a successful career in psychology: it depends on who you ask. *Educ Psychol Measure* 1994; 54:447–458.
13. Peluchette JVE. Subjective career success: the influence of individual difference, family, and organizational variables. *J Vocational Behav* 1993;43:198–208.
14. Laurent A. Effects of question length on reporting behavior in the survey interview. *J Am Stat Assoc* 1972;67:298.
15. Portney LG, Watkins MP. Surveys. In: *Foundations of Clinical Research: Applications to Practice*, Norwalk, CT: Appleton & Lange, 1993:251–269.
16. U.S. Department of Commerce. *Statistical Abstract of the United States 1997*. The National Data Book. Springfield, VA: 1–59.