
ORIGINAL ARTICLE

Experiences and perspectives of chiropractic students graduating from an alternate admission track plan

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Objective: This study explored self-reported experiences of alternate admission track plan (AATP) students who completed a chiropractic training program at a US chiropractic college.

Methods: Our institution conducted semistructured exit interviews with 16 graduating AATP students. Our consensus-drafted open-ended interview questions probed in-depth for these students' experience throughout the training program, with national board exams, their personal characteristics, their satisfaction with the training program generally, and with the AATP program specifically. We employed a content analysis to identify themes and patterns of responses across the blinded deidentified interview transcripts. We used a combination of deductive coding based on our interview guides, and inductive coding to identify newly emerging subthemes.

Results: Perceived facilitators of student success were strong commitment to chiropractic, cooperative, and supportive environment (eg, student study groups and a highly committed faculty), work ethic, and time management skills. Although many recommended that AATP entrants without science backgrounds take prerequisite courses in biology and chemistry, they also observed that a capable student could dedicate the time and effort to obtain the needed information via available college resources.

Conclusion: Graduating AATP students were positive about the AATP program overall, and their preparation for national board exams and for clinical practice. They greatly valued the opportunity to accelerate their entrance into chiropractic college. A major limitation of this study is that the perspectives of AATP students who did not complete the doctor of chiropractic program are not represented in these interviews of graduating students.

Key Indexing Terms: Chiropractic; Education; Students

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INTRODUCTION

The reasons for institutions of higher education to evaluate and alter their admissions standards and policies are many and complex. Admitting students to academic and professional programs in a fashion that breaks with tradition can benefit students, institutions, and society. The medical profession offers some examples of this theme as the world of health care is shifting more toward a holistic, patient-centered, and preventive approach with its desirable cost-effectiveness.^{1–3} However, when an alternate admissions program reduces or eliminates prerequisite coursework, it also becomes an experiment with potential drawbacks and failures. It is incumbent upon institutions to carefully monitor students admitted to such programs relative to their experiences, both successes and failures, so that adequate and effective support can be provided along the way.

In 2011, US chiropractic training programs were authorized by the Council on Chiropractic Education to develop an alternate admission track plan (AATP) to allow matriculation of students who did not meet the standard admissions criteria.⁴ The Council on Chiropractic Education's policy set minimum baseline requirements, but allowed the colleges to develop alternate criteria and rationales for accepting into their doctor of chiropractic training programs (DCP), those AATP students who fell between the baseline and the standard admission criteria.

The rationale for such a break from tradition is perhaps best captured by an admissions post on 1 of the chiropractic college's website: "The AATP is a program that allows chiropractic colleges to admit students with varied backgrounds in undergraduate coursework. The flexibility of the AATP program allows the colleges to consider the accomplishments of each student as key indicators of what makes a chiropractic student successful. This program acknowledges that people come to the

chiropractic profession from myriad backgrounds and that this variety in the chiropractic profession is valuable to its future growth. The AATP program allows colleges to admit students who do not meet standard admissions requirements but who do exhibit other markers of skillfulness and potential for success.”⁵

As the AATP tracks have been developed within the individual chiropractic college communities since 2011, a body of investigative and evaluative literature is also being created. Several quantitative studies offer a glimpse of student outcomes based on statistical measures between pertinent variables such as entering grade point average (GPA), GPA in the first year of the DCP, National Board Scores, and relevant preparatory science coursework, such as chemistry, physics, and/or anatomy and physiology.^{6–8} Although these noted quantitative studies offer understanding of students’ outcomes based on statistical relationships between variables of interest, the studies are limited in that they only looked at secondary source data that were available to measure student performance and outcomes (eg, GPA, National Board of Chiropractic Examiners scores) rather than collecting new primary data directly from the subjects themselves.

In our study, we were interested to delve more deeply into understanding the individual experiences of our AATP students, as reported directly by them. Our research investigated ways that students admitted without prerequisite science knowledge can be successful and complete the DCP. By looking at the program from the perspective of the matriculants, our goal was to identify both weaknesses and strengths of the AATP program from student self-reported experiences so that the collected data might better inform our institutional operations and better support the individualized instructional needs of our students. In 2013, our institution admitted its first AATP students and graduated its first cohort of AATP students in 2017. To our knowledge, this study is unique in that we use graduating AATP students’ own words, rather than retrospective data, to document students’ experience and identify factors they describe as facilitators and barriers to success in the DCP program.

METHODS

We interviewed graduating AATP students at Life Chiropractic College West. The 3 primary investigator/authors (NS, SR, DS, all of whom are basic science faculty) collaborated with research staff (DO, MS, DJ, BG), to carry out this research project at our institution. We developed a structured interview guide for “exit interviews” of graduating AATP students in their final academic term preparing to graduate from our institution. To protect the privacy of the research subjects and the confidentiality of the study data, research staff performed all identification and recruitment of AATP students as research participant subjects and conducted all data collection and data management (the conduct and recording of interviews, and generating initial interview transcripts). Interviews were audio recorded and out-

sourced for professional transcription services. All interview transcripts were anonymized by research staff before being released as blinded transcripts to the study investigators for analysis. The project was reviewed by the Life Chiropractic College West Institutional Review Board (approval #PIDN 2017-002).

Participants

We contacted 23 AATP students who were scheduled to graduate during the 4 quarterly academic terms of our data collection (2016–2017). All the students, who later graduated, consented to participate in exit interviews; however, we were only successful in interviewing 18 of the 23 due to scheduling difficulties during the academic quarter immediately preceding their graduation. Interviews of graduating AATP students began in the Spring 2016 quarter, the first quarter that AATP students were graduating from our institution. Interviews took place between Spring 2016 and Winter 2017 quarterly academic terms.

An experienced interviewer conducted structured interviews using a consensus-drafted interview schedule of questions.⁹ The interviewer asked predetermined questions and probed for in-depth responses. In brief, the open-ended questions focused on students’ experience in the DCP, including their experience with basic science courses, national boards, barriers to and facilitators of fulfilling graduation requirements, and the DCP overall. We also asked students about their personal characteristics, their academic preparation before entering the program, and their satisfaction with the AATP program.

Given the small sample size, we took steps to maximize confidentiality and minimize the possibility of deductive disclosure, which is the ability to figure out an individual respondent’s identity and responses from their study data.¹⁰ We did not include sociodemographic or academic information in the data set of interview transcripts, we omitted dates of interviews and graduation, and we edited some of the quotations as needed to increase anonymity. From the $n = 18$ original (blinded) transcripts, we removed 1 transcript because the student subject self-identified as “not truly AATP” (removed due to misclassification error), and we removed 1 transcript because 1 of the faculty investigators felt that they could potentially identify the student subject based on their responses during the interview (removed due to unblinding during data analysis). Our final data set consisted of $n = 16$ transcripts from interviews with AATP student subjects.

Data Analysis

We conducted a content analysis to identify patterns in the interview data, using a combination of predetermined deductive themes that were based on our previously prepared interview guides, and inductive coding to identify emerging subthemes.¹¹ After initial review and preliminary descriptive coding by the research team to identify the presence of overarching themes and detect patterns in the data, 4 authors coded 25% of the transcripts to create categories of codes, standardize coding, and abstract data

in the form of quotes.¹² After discussion with the team, 2 authors (SR and NS) then coded the remainder of the transcripts. All authors reviewed the coding, making revisions as needed. We met throughout the process, discussed coding, definitions, and themes, and resolved discrepancies by consensus.

RESULTS

We summarize the results of 16 exit interviews of graduating AATP students, and present quotations that illustrate patterns and differences in the data. In each section, we include quotations from several different students. Quotations are edited for clarity and brevity while retaining meaning. We examined 4 predetermined, overarching themes: (1) perceived facilitators of success in the DCP; (2) self-identified personal characteristics; (3) perceived barriers to success; and (4) perceived value of the AATP program. During the analysis, a 5th theme emerged inductively: how students' experience in the DCP changed over time. Analysis also revealed a thread common to all thematic categories: the strengths and challenges involved in learning how to learn and study within the time constraints of an information-intensive graduate-level program while assimilating a new language of science and chiropractic. See Appendix A (available as online-only material accompanying the article) for a more exhaustive list of quotes, from which we excerpted the salient examples reported below.

Perceived Facilitators of Success

When students talked about specific factors which they felt facilitated their success, they mentioned the AATP program structure, faculty involvement in their instruction, and the materials they received. Students also talked about the college's attention to their individual learning needs:

"My biggest fear was that I wouldn't be able to keep up because this would be my first time I'm ever hearing about anatomy, about physiology and chemistry. But what I found was the way that the program is [structured] ... I felt totally at ease with this material ... learning it in real time with the faculty in the course. I never felt overwhelmed."

Several said that it was helpful that course content builds and integrates from 1 course to the next. "I think the program is designed in a way that you can succeed...one of the benefits of the way they structured the program is a lot of repetition." Students also talked about the college's attention to scheduling and to their overall learning needs: "To be able to have time in the middle of the day to hang out in the library and take care of homework was very helpful for me."

Specifically, students said that the AATP meetings they had early in the program and the materials they received there were helpful as they oriented themselves to the unfamiliar subjects presented in basic science and clinical courses.

"In a lot of ways I almost felt like we had almost an advantage because when we started out, we had all those meetings [they gave] us homework and things like flash cards [with] basic medical terms that none of us really used before in previous study...They were really helpful because it was words that we were hearing constantly in all of our classes first quarter."

"I appreciated that every week we were handed a different type of material to help supplement us with medical prefixes...or a little crossword activity to just to get more familiar with this kind of vocabulary."

However, not everyone felt that way: "The first few quarters they were holding our hands and we'd have a weekly meeting. And I was like oh, I don't need this." Two students pointed out that the medical terminology was also covered in courses later in the program. One student said, "I think like in the beginning we had homework assignments for AATP. I don't know if that was necessary."

Several students said that peer tutoring was useful to them, especially early in the curriculum. "I had a tutor every quarter for most of the classes and I took advantage of that and that definitely helped me... That also was one of the things that helped me figure out how to study sciences." Most students saw the faculty, the quality of teaching, and the personal attention they received as beneficial. Although some students complained about the instruction or level of difficulty in specific classes, generally their comments were positive:

"I think in every quarter it tended to be the teachers who had a mixture of being personable but also professional that made the learning experience comfortable even for someone who had no prior experience."

"[The faculty] are dedicated to us being successful, like they want us to not just get the information or pass their class, but they want us to be great at what we do. And so they ... take the temperature in the room and see who's not understanding a concept and spend extra time, and encourage questions."

Self-Identified Personal Characteristics

After being asked which of their personal characteristics they thought might contribute to their success in the DCP program, students talked about attitude, motivation, maturity, previous education and experience, learning style, and enthusiasm as factors in their success. Typical comments included "Being optimistic, a positive thinker. Not being anxious. And also maturity," and "I think the biggest motivation...was actually having the passion and knowing my end goal [was] to complete this program," and "I really looked at it from the perspective of this as a challenge and I'm going to meet the challenge and this is going to be fun."

Interestingly, several students characterized their non-science backgrounds, or their status as mature students

returning to college for a second career as advantages for successful management of coursework and with regard to the development of interpersonal clinical skills. Two explicitly said that their nonscience undergraduate degrees helped them with coursework and later in the program with their ability to listen to and understand their patients.

“My social sciences degree has helped me through some of these classes, has helped me through the public health classes, helped me through classes talking about economic status, recognizing difference in race and sex and gender, people’s behavior; helped me talk about research.”

“Having come from a creative writing background, I think some of the skills that I learned not just from studying but also from the job that I had prior to getting into school [wound] up benefiting me in my ability to communicate with people once I started interfacing with patients in the clinical portion [of the curriculum].”

Others identified less-tangible benefits of nontraditional backgrounds: “I think that being older was beneficial. I definitely didn’t get involved in any drama. . . I was here to become a doctor and so it was very easy to stay focused on doing that,” and “I’ve had many difficult jobs that required management of many different departments at once.” Another commented, “Honestly I like that I didn’t have [the prerequisites] because it did allow me to hear it for the first time and to be like in wonderment. . . that made the learning process almost magical.”

Some students speculated that a science background would have helped to expand their understanding of the material, but said it was not necessary to succeed in the program. Some described initial difficulties with the basic science curriculum. One said, “A lot of that also for me, in the beginning was having not really studied sciences, it was like in a lot of ways learning how to study sciences,” while another said, “The pace of the class was a lot faster than in massage school, but the information was the same.” Some talked about needing to adjust or accommodate their visual, auditory, or kinesthetic learning styles.¹³

“Something I learned about myself throughout this process is that I am actually a very auditory learner. . . the things that I studied prior to getting into school were so different that I found studying with other people really good.”

“I don’t really learn [by reading stuff on paper]. I learn by hearing it, I learn by seeing it, I learn by interacting around the material and seeing examples. . . So it was a great experience to figure out, oh, this is how I study.”

Perceived Barriers to Success

Students talked about the difficulties they had with specific basic science courses. One said, “I think Chemistry

. . . was just a tough subject for me, like to understand the concepts and things like that.” Another said, “[I needed to work harder in] Cell Physiology, Microbiology, Biochemistry, anything having to do with chemistry, things that are not very tactile. . .”

Throughout the interviews, students discussed the challenges of learning how to learn unfamiliar material, and described ways they adapted. Some characterized this as being similar to learning a new vocabulary, or the language of science. They found it difficult to cope with learning the appropriate terminology at the same time as the concepts to which the terms were being applied. One student commented, “[it] felt like I was learning a brand new language and I was totally immersed in it and I had no idea what was going on. . . We go by it way too fast, and it’s just—It’s so much information.”

Time considerations and the fast pace of the 4-quarter academic system were mentioned by several students, with such comments as “Much effort is required in a program like this because it is a long time, and there aren’t very many really adequate breaks in between quarters to fully rest and recharge and get ready,” and “I definitely at times felt really limited by when I had to be in class, the hours I had to see my patients and then also having to find time to study for all the tests I needed to take.”

“We couldn’t register like everybody else. We had to go through a special process because we were AATP that was a little frustrating because there was no reason like a waste of time. Like we were there because we had to be. And it didn’t seem like it was beneficial to our progress in school.”

Change Over Time in Students’ DCP Experience

Students talked about initial challenges facing AATP students who, for the most part, did not have a science background. However, they also said that as they moved forward in the program and they developed study skills, things got easier, and they felt they caught up with regular-admission students. One said, “And so I haven’t really necessarily viewed myself as like an AATP student, except in the very beginning. Sometimes I actually forget that I am still.” Others reported “After four quarters of getting tutored I felt that I had enough understanding of how to study things I didn’t feel like I needed the tutoring as much. . .” and “Once I learned how to study, I feel like I was able to apply what I knew really effectively and learn what it was I had to learn to get through the program.”

“You’re about halfway through the program and then all a sudden the information that you were learning that you were memorizing . . . now all of a sudden you’re using it in a critical thinking way and you’re . . . talking about dealing with people now. It was like I could keep up probably with a 12-quarter program at that point.”

Perceived Value of the AATP Program

In addition to specific facilitators, students talked about the overall value of the AATP program, which waives

some prerequisites for admission, spaces out classes and allots 2 additional quarters for them to complete the DC degree:

“[Without AATP] I would have had to wait a longer time to start my program. . . I appreciated having the opportunity to do 14 quarters. I definitely feel like had I tried to do it in 12 that would have been too much. . . I felt like it made a huge difference for me in being able to keep up and feeling like I could navigate the program with ease.”

A few students said that they felt they could have succeeded in the regular program: “I was kind of wishing that I could have done the accelerated programs. I think I would have had no problem managing that. . .” Another said, “I never felt like I was at a disadvantage. I never felt like I needed to utilize any of the extra stuff that was available to us.” Most comments about the value of the AATP program overall were positive. One student said that they felt successful the entire time because even not having previous exposure to the material they were able to “not only get through it, but feel super confident.” Another commented:

“I looked at it like the school was taking responsibility in the sense of ‘okay we let you in knowing you don’t study science so we are going to be watching you really closely to make sure you don’t slip through the cracks or fail.’”

DISCUSSION

The college’s AATP program enables students to extend their coursework by 2 academic quarters, and provides them with additional resources. During their initial quarters in the program, students attended weekly interactive meetings with the Dean of Students in which they received expanded study materials, advice about how to study, and support, as necessary. The graduating AATP students self-identified factors that they felt were central to their success in completing the program. We reported on the recurring themes we found in that students mentioned both facilitators and barriers to their success in the DCP, that they felt that their personal characteristics generally contributed to successful completion of the program, and that their experiences changed considerably over the course of their time in the program. The overall merits of the AATP program as seen through the eyes of those soon-to-graduate as DCs were positive, given that many of our graduating students opined that they valued the AATP program experience and would recommend it to others. Students in the AATP program are exempted from strict science prerequisites and were able to succeed in the DCP, although some did note that a stronger science background could have benefited their overall learning experience, particularly given the need for them to concurrently assimilate a new language of science and chiropractic.

We identified a common thread across all thematic categories, as students talked about the rigor and intensity of the DCP, requiring that they improve their study skills and identify effective learning strategies, that is, “learning how to learn,” and becoming conversant in the language of science. This is in accordance with reports that students perceive the language of science to be different from other disciplines and that they believe that they need to learn to use technical terms and factual details to succeed in their science classes.^{14,15} Others have found that students’ ability to use scientific language can support their conceptual knowledge and shape the way they think about their identities as members of the scientific community.^{16,17}

Although we did not access student academic records, GPAs, or Board scores, our findings are nonetheless in line with those reported from other chiropractic colleges, in that the students we interviewed said that they did not feel that they were at a disadvantage in their DCP courses, especially as they progressed throughout the program. Derby et al⁷ found that AATP status was only weakly associated with markers of academic success. Manrique and Giggelman⁶ found no differences in first year GPA between AATP students who had taken or not taken undergraduate courses in chemistry and anatomy and physiology; however, they did find differences in composite National Board of Chiropractic Examiners Part 1 scores. Further research is warranted to better understand possible implications for the effectiveness of AATP programs at chiropractic colleges.

Our institution internally generates a Program Enrollment Admissions Report, which indicated an annual rate of approximately 2% to 3% of students dismissed for academic reasons regardless of AATP status, during the timeframe that our study cohort were students. Although academic dismissal rates for “regular” (non-AATP) students were comparable with the rate for AATP students in our study cohort, we must also note that a major limitation of our study is that we did not interview any of the AATP students who did not complete the DCP. We therefore cannot report on the full range of students’ experience in the program, nor can we report on which factors might contribute to program dropout. Because we interviewed students as they were in their final academic quarter and preparing to graduate, the interviews essentially became discussions about what led to the students’ success in completing the program, and how they addressed challenges they faced on the way. The interviews were largely retrospective, and students might have had better recollection of, or given more weight to, recent events. However, given their explicit descriptions of how they navigated different phases of their chiropractic education, we believe that our findings capture a substantial range of successful AATP students’ experiences throughout the program.

Our findings have the potential to support AATP students’ learning experiences and strengthen AATP programs overall by adding to the growing body of knowledge about these programs in chiropractic colleges. The students we interviewed successfully completed the program, and it is likely that the experience of our

graduating AATP students is not fully representative of all AATP students. Because we only interviewed AATP students, we are also unable to discuss the comparative experience of AATP and non-AATP students, and some of our findings might be common in both groups rather than applying to AATP students in particular.

CONCLUSION

Our study findings help to characterize the self-identified success attributes of AATP students who have completed the DCP at 1 US chiropractic college. Graduating AATP students were positive about the AATP program overall, and their preparation for national board exams and for clinical practice. They greatly valued the opportunity to accelerate their entrance into chiropractic college. The interviewees largely self-identified as dedicated, motivated, and successful AATP students. More research is needed to understand why students drop out from chiropractic college temporarily or permanently, including both AATP and standard admission students. Further research would also help us to better understand the needs of AATP students, and chiropractic students generally.

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The authors have no conflicts of interest to declare relevant to this work.

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