ATHLETIC TRAINING EDUCATION JOURNAL

www.nataej.org

ORIGINAL RESEARCH

Educational Preparation and Experiences in the Clinical Setting: Entry-Level Clinical Athletic Trainers' Perspectives

Jim Schilling, PhD, ATC, CSCS*

*University of Southern Maine, Gorham, ME

Context: The clinical job setting: (Outpatient/Ambulatory/Rehabilitation Clinic) should no longer be referred to as a nontraditional setting as it employs the greatest percentage of certified members. Understanding the experiences, knowledge, and skills necessary to be successful in the clinical setting as entry-level certified athletic trainers (ATs) is critical information for future Athletic Training Education Program (ATEP) curriculums, continuing education, and post-graduate fellowships.

Objective: To gain an understanding of the general experiences encountered and perceived educational preparation necessary for entry-level ATs in the clinical setting.

Design: Online questionnaire.

Setting: Clinical.

Participants: 15 entry-level clinical ATs.

Main Outcome Measures: Experiences and educational preparation in the clinical setting as perceived by clinical ATs using an inductive content analysis strategy.

Results: Most subjects entered the clinical setting upon graduation and were attracted by fewer hours and higher salaries. The most positive experience once hired was learning from colleagues and the greatest job satisfaction occurred when helping people. The participants also suggested that future graduates should feel confident when entering this setting. While the participants felt ill-prepared regarding insurance issues and communication skills, they felt well-prepared in injury evaluation and treatment. Overall, they found insurance restrictions limiting the scope of care they could give the most challenging.

Conclusion: Athletic training graduates are attracted to the higher salary and shorter work hours associated with the clinical setting, but still associate helping people as primary to their job satisfaction. Although most entry-level ATs perceived themselves as well prepared for the clinical setting, weakness in the areas of insurance issues and communication skills were identified.

Key Words: Professional socialization, job satisfaction, career selection.

Dr. Schilling is currently an Assistant Professor at The University of Southern Maine in the Exercise, Health and Sport Science Department. Please address all correspondence to Jim Schilling, PhD, ATC, CSCS University of Sothern Maine, 37 College Ave, Gorham, ME, 04038. jschilling@usm.maine.edu.

Full Citation:
Schilling J. Educational preparation and experiences in the clinical setting: Entry-level clinical athletic trainers' perspectives. *Athl Train Educ J.* 2011;6(3):145-153.

Educational Preparation and Experiences in the Clinical Setting: Entry-Level Clinical Athletic Trainers' Perspectives

Jim Schilling, PhD, ATC, CSCS

Certified athletic trainers (ATs) have the expertise to provide health care services to a variety of active populations and are using their talents in an expanding number of job settings. The clinical setting: (including Outpatient/Ambulatory/ Rehabilitation Clinic) should no longer be considered non-traditional, 21% of ATs who are members of the National Athletic Trainers' Association (NATA) are employed at outpatient clinics.[1] Within the clinical setting category exist subcategories including: hospital-based clinic, outpatient-ambulatory-rehabilitation clinic, physician owned clinic, secondary school-clinic, and other clinic.[1] While most roles ATs encounter in clinical job settings are familiar, others are unique. A familiar role may be providing traditional care for athletes in high schools, colleges or universities, and professional sports who are contracted by a clinic on an outreach basis. Other roles within the confines of the clinic are somewhat unique to the conditions of this setting. These may include assignments concerning outpatient rehabilitation and physician extender duties. For example, in outpatient orthopedics, the AT may be responsible for aiding physical therapists in the treatment of active patients with musculoskeletal injuries or provide treatment for their own active patients with similar injuries. These patients may be "active" but are not necessarily competitive athletes. Treatments in the clinical setting are often limited by both number of treatments and time per treatment allowed, and include an emphasis on specific documentation to ensure third-party reimbursement. As a physician extender, the AT may take patient histories, create home exercise programs, or fit patients with a brace, all to give the patient a more efficient and productive experience through the appointment and treatment process. Other unique roles may develop in specific clinical circumstances.

A students' formal education is part of the anticipatory socialization developmental process. An investigation into the socialization of ATs employed in high school settings suggested that AT practitioners need to be self-directed in their professional development.[2] The results from this research emphasized the importance of athletic training students taking an active role in the learning process during their Athletic Training Education Program (ATEP) experience. For example, students were encouraged to create reflective journals, individualized learning plans, and self-evaluations.[2]

Studies[3,4,5] investigating the educational preparation of ATs employed in multiple settings were also conducted. One survey[3] asked athletic trainers who had been certified for 5 and 10 years if they perceived receiving adequate preparation for their careers in various job settings. Ninety percent of the participants in this research admitted receiving adequate preparation at the entry-level their respective careers. The participants of this study had not studied under an established set of standardized educational competencies for athletic training majors. Another study[4] used 183 ATs employed in sports medicine centers, colleges, and high schools for 18 months or less and measured their perceived educational preparation from their respective ATEPs for their specific work setting. Thirty-nine percent of the respondents were employed in sports medicine centers. This study concluded that they received adequate preparation in the task areas of evaluation of athletic training injuries and illnesses, prevention of athletic training injuries and illnesses, and first aid and emergency care, but not in the task areas of rehabilitation of athletic injuries, organization and administration of athletic training programs, and counseling and guidance of athletes. The entry-level participants of this research studied under the manual for ATEPs entitled "The Guidelines for Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs." This manual was the first documented list of educational competencies for the athletic training major.

A third investigation[5] was conducted consisting of focus groups representing university, high school, clinical, and industrial settings to determine if NATA conferences and workshops were addressing the continuing education needs of their respective settings. The representatives of the sports medicine clinic group felt that the less traditional topic areas including, promotion and marketing of athletic training, legal issues, functional capacity exams, insurance, manual therapy, and documentation were not emphasized as needed.

Investigations of athletic training educational preparation specific to the clinical setting as perceived by clinical directors[6] and employers[7] have also been conducted. The first study[6] investigated the perceptions of 127 clinical directors regarding the ATEP's role in preparing students to in the clinical setting. The directors rated the relative importance and relative performance in several major task areas of competency. The results of this work found that evaluation, prevention, and rehabilitation were rated as very important, while first aid, organization and administration, and education and counseling were rated less important. Another study[7] was done to discover employer's perceptions of the educational preparation of entry-level ATs to work in the clinical settings. A questionnaire assessing their satisfaction with AT graduate's preparation across the 6 domains of knowledge and skills established by the National Athletic Trainers' Association Board of Certification suggested that the employers were satisfied in the area of technical skills, but less satisfied with the graduate's interpersonal and communication skills. Research[20-24] has also been conducted to investigate other health care professions in determining the adequacy of their educational programs in preparing students for their respective work settings. Entry-level practitioners who studied under the 4th edition[8] Athletic Training Education Competencies have not yet shared their perceptions of educational preparation. This exploratory research will indicate the perceived effectiveness of the present curriculum at preparing students as entry-level ATs, and can also be used to compare results from future investigations on graduates studying under revised editions of competency documents. Therefore, the purpose of this study was to identify current entry-level AT's experiences and perceptions regarding their educational preparation to enter the clinical setting.

METHODS

Data collection used mixed-methods, with both close-ended quantitative questions and qualitative open-ended questions.

The qualitative data was analyzed through inductive content analysis which has been established in nursing research[13] and is commonly used in health and social science research.[14]

Participants

To ensure a portion of their education was completed under the 4th edition of the educational competencies, subjects must have been both AT and have graduated from a Commission on Accreditation of Athletic Training Education (CAATE) accredited ATEP between December 2006 and May 2009. Since the 4th edition of the Athletic Training Educational Competencies document was initially implemented during the 2006-2007 academic year, subjects in this research would have studied at least one semester under this document. In September of 2009, there were a total of 7,502 NATA certified members listed under the clinic job setting category,[1] Eight hundred and seven graduated between May 2007 and May 2009. The number of graduates in December of 2006 could not be determined, but was estimated to be approximately 100. Consequently, approximately 12% (n=907) of the total certified members listed under clinical settings fit the criteria of this study. Due to members either choosing survey blocks as an option of membership or spam filters on their home computers preventing them from receiving a survey, only 3,600 of the total 7,502 ATs could potentially receive a questionnaire. Contact information for a random sample of 300 ATs under the clinic job setting category was obtained from NATA member services. The number of invitations was limited due to financial constraints. It was estimated that if 12% of the chosen sample fit the criteria to participate, there would be approximately 36 (12% of 300) possible subjects. Fifteen entry-level clinical ATs agreed to participate in the study or approximately 42% of the random sample.

Instrumentation

A web-based questionnaire using the software product SurveyMonkey (2007 SurveyMonkey.com) was chosen for participant convenience, fast response times, and cost effectiveness. Other advantages of using web-based qualitative research have been documented, such as responders being more likely to respond to open-ended questions,[9] and to add more insightful comments.[10] A questionnaire was constructed by the author based on his expertise in the clinical setting. The instrument consisted of a demographic information section, a section asking open-ended questions regarding the participants' experiences within the clinical setting, and a section asking open-ended questions pertaining to their perceived educational preparation for the clinical setting (Appendix A). Several questions included in the educational preparation section were synonymous in nature to ensure credibility of the data through consistent responses.

The instrument was reviewed by 3 clinical AT experts and 3 qualitative research experts for content validity. Expert status was determined by a minimum of 10 years experience in their respective fields. The clinical AT experts were asked to verify that the questions included in this questionnaire are adequate to gain an understanding of the experiences and educational preparation of an entry-level AT in a clinical setting. The research experts were asked to verify that the questions included in this questionnaire were constructed and organized in the best way to achieve the purpose of the research.

The instrument was also pilot tested with two ATs listed under the clinical job setting category (non-participants of the study) to obtain face validity through input on questionnaire clarity, length, and technical issues. Neither subject recommended changes.

Data Collection

The institutional review board granted approval for this project prior to data collection. The email distribution list, customized invitation message, and questionnaire delivery schedule were placed in the email invitation collector option within the web-based software. Each subject's consent was obtained at the end of the invitation message, before they were transferred to the questionnaire itself. The initial data collection took place in November of 2009. Two follow-up surveys using identical procedures were sent to the non-respondents at one week intervals following the initial mailing. All responses were collected anonymously by selecting the "not save email address" setting on the survey format prior to collection.

Data Analysis

The results of this investigation were derived through an inductive content analysis strategy which consisted of organizing the data into general patterns or common themes which were then labeled as categories. Categories were established when a minimum of 3 common themes were stated within a question's response. For example, responses such as "ins and outs of insurance", "billing knowledge is limited", and "insurance guidelines" would be placed under the category of "insurance issues." The labeled categories were reviewed by three experts in the clinical setting. One of the experts asked to review the results had also reviewed the instrument initially for content validity. This technique was used to ensure trustworthiness of qualitative data by attempting to establish credibility of the results through agreement by experts.[11]

RESULTS

All subjects for this study responded to all the questions. The three experts who reviewed the data agreed that the emerging categories identified by the researcher represent the data collected. The demographic information gathered and questionnaire used are supplied in Appendix A. The demographic data collected from the sample group is supplied in Table 1.

Experiences

Four categories of clinical setting experiences emerged. First, the responses suggested the participants chose the clinical setting due to working fewer hours, and the higher salaries associated with this setting. For example, subjects who either worked in a physician-owned clinic and/or spent 76-100% of their total working hours in the clinic chose the clinical setting specifically because of the hours. Other examples of responses included, "because the work hour to pay ratio is more desirable in the clinic" and "more regular hours, more competitive pay."

Subjects also expressed the opportunity to learn from colleagues who were experienced ATs, physical therapists, and physicians as the most common positive experience encountered in the clinical setting. They stated "the enormous amount of information I learn just by working with orthopedic physicians" and "the head PT at the clinic I am in has been a great source of information."

APPENDIX A. Demographic Information

Gender:
A. Male
B. Female

Age:
A. 21-25
B. 26-30
C. 31-35
D. 36+

Highest Degree:
A. Bachelors
B. Masters
C. Doctorate

Years as a Certified Athletic Trainer:
A. 0-1
B. 2-3
C. 4-5
D. 6+

Length of time employed in a clinical setting:
A. 0-6 months
B. 7-12 months
C. 13-18 months
D. 19-24 months
E. 25-30 months
F. 31-36 months
H. 37+ months

Indicate your current clinical practice setting:
A. Hospital-based clinic
B. Outpatient/ambulatory/rehabilitation clinic
C. Physician owned
D. Secondary school/clinic
E. Other clinic

Percentage of total working hours spent within your clinic (excluding outreach responsibilities:
A. 0-25%
B. 26-50%
C. 51-75%
D. 76-100%

How would you explain your role within the clinic:
A. Physician extender
B. Rehabilitation – Own patients
C. Rehabilitation – Aid to Physical Therapist
D. Other_____

Study title: EDUCATIONAL PREPARATION FOR THE CLINICAL SETTING:

ENTRY-LEVEL CLININCAL ATHLETIC TRAINERS' PERSPECTIVE

Please express your thoughts to the following questions:

1) Why did you choose employment in a clinical setting as opposed to working in a university, high school, or other setting?

2) What have you done in instances whereby you needed some assistance or support to fulfill an obligation at work?

3) What positive experiences have you encountered so far working in the clinic?

4) What did your orientation to your present position involve? Was adequate information supplied to you? If not, what was lacking?

5) Is there a role model for you in athletic training? If there is, what is the relationship and what did you learn from him or her?

6) What things about your position provide the most job satisfaction? What things provide the least satisfaction?

7) What recommendations would you share with current athletic training graduates beginning their first job in a clinical setting?

8) When you began your job, how did you envision yourself as a clinician compared to other more experienced clinicians?

9) As you know, beginning in the year 2006, the athletic training education programs were required to be accredited by the Commission on Accreditation of Athletic Training Education (CAATE). Do you feel the competencies required by CAATE in your athletic training education program covered what was needed at your job? What competencies were covered? What competencies were not covered?

10) When you first began working in a clinical setting, did you feel prepared in regards to the knowledge needed for your position?

11) When you first began working in a clinical setting, did you feel prepared in regards to the skills needed for your position?

12) Have you noticed differences between your educational experience and your present "real world" experience in the clinical setting? Are there specific skills you have had to learn on the job that could not be taught in the education program?

13) What aspects of your job do you find to be most challenging?

14) What areas did your athletic training education program prepare you well for in your role in the clinic?

15) What areas did your athletic training education program not prepare you well for in your role in the clinic?

16) The purpose of this questionnaire was to gain an understanding of what novice athletic trainers experience working in a clinical setting. Is there anything you would like to add about your experience that was not covered in this set of questions?

Overall, participants cited helping people as having the greatest impact on their job satisfaction. Example statements include, "the most job satisfaction comes from being able to help people get back to activities of daily living" and "watching, helping, guiding someone from injury back to competition." "Seeing the progress is exciting."

Lastly, a consistent recommendation was to be confident in your abilities with responses such as, "go in with a positive attitude and look at it as a learning experience and a chance to perfect your clinical skills" and "let the therapists know that you have skills."

Educational Preparation

Three categories emerged from questions stemming from educational preparation for working in the clinical setting. Competency areas that the participants consistently felt were not adequately covered in their ATEPs that were necessary for employment in clinical settings were insurance issues and communication skills. In particular, two of the participants whose role in the clinic was rehabilitation with their own patients and all subjects with a bachelor's degree only felt that competencies in communication skills were not covered adequately in their ATEPs, leading them to self-teach on the job. Examples of statements concerning communication failures were, "the one area that I wish was a little more focused on is conflict resolution with coaches, parents, and athletes" and "I think there is so much focus on the physical aspect of athletic training that things like communication with coaches and parents is lacking." Concerns regarding insurance issues included "billing knowledge is limited" and "ins and outs of insurance."

Four out of seven male participants also commented that insurance restrictions limiting their scope of practice was the most challenging about employment in the clinical setting. Examples of concerns were "being restricted by Medicare and insurances to practicing in the clinical setting" and "insurance companies can be frustrating."

On a more positive note, a majority of female participants (5 of 8) felt their ATEPs prepared them well in the areas of injury evaluation and treatment of musculoskeletal injury skills. Responses made in this category were "evaluation, treatment, taping, modalities" and "patient treatment, evaluation, and use of modalities." Interestingly, five out of the six participants who reported spending the least amount of time in the clinic (only 0-25% of their total hours) felt their ATEPs prepared them well for their roles in the clinical setting.

DISCUSSION

This study was completed to better understand the work experiences of entry-level ATs initially employed in the clinical setting who were educated under the 4th edition of the Athletic Training Educational Competencies and assess their perceptions of how well their ATEPs prepared them to work in this setting. Examining the experiences and perceived educational preparation of entry-level ATs provided numerous findings. The significance of the results and how they relate to previous works will be discussed.

Experiences

Reasons for Selecting the Clinical Setting

Previous research[15, 16] has investigated AT salaries and hours required of various work settings. A survey[15] on entry-level athletic training salaries stated ATs employed in the hospital – clinic received a higher salary and worked fewer hours per week than university or high school settings. A survey[16] conducted by the NATA in 2008 compared three traditional employment settings (professional sports, college – university, and high school) to two nontraditional (industrial – occupational and clinic), the average annual salaries of ATs employed in these settings were in the following order: professional sports were highest, followed by industrial-occupational, high school, clinic, and lastly college – university. Anticipated higher salaries and fewer working hours per week compared to the potential demand on their time in traditional settings may provide motives for athletic training graduates to seek employment in the clinical setting.

Positive Experiences

The most positive experience encountered while working in the clinical settings was learning from colleagues. Although the participants expressed confidence in their evaluation and treatment of musculoskeletal injury skills, the ability to learn new treatment philosophies and approaches from their physical therapist and physician colleagues was positively received.

Job Satisfaction

All health care professions carry with them the common goal of helping people get through their bouts of injuries and illnesses. The participants of this study stated the greatest job satisfaction came from helping people. This response would be expected regardless of setting. Previous work[17] has suggested that becoming a health care professional and helping others were attractions that contributed to athletic training graduates choosing a high school job setting. The present population stated these factors as areas of job satisfaction and possible retention as apposed to the initial attraction or reasons for selecting a clinical setting.

Recommendations for Future Graduates

The subjects agreed that athletic training graduates possess the skills necessary to be competent in a clinical setting. However, the patient population served in a clinical setting is more diverse than the traditional settings, and often includes geriatric, pediatric, chronic pain, and post-operative patients. The clinical environment may also place greater emphasis on patient education as the client may be asked to take a more active role in the rehabilitation process through home exercise programs due to insurance plans limiting the number of clinic visits. Furthermore, subjects recommended that future ATs should be confident in their abilities, and not shy away from work in the clinical setting.

Educational Preparation

A survey[18] asked employers to share which employee characteristics were perceived as most important when hiring ATs. Thirty six percent of the employers who responded were from clinical settings. The study found that regardless of the AT's

work setting, personal characteristics such as communication skills, enthusiasm, initiative, interpersonal skills, self-confidence, ambition, and problem-solving skills were rated as highly important. Employers of this research seeking entry-level ATs argued that soft skills, such as communication and self-confidence are of greater importance than technical skills, including evaluation special tests and treatment skills. In addition to clinical employers of ATs desiring competence in communication skills, a study introduced earlier[7] discovered employers of clinical settings perceived entry-level ATs as deficient in the area of communication skills. Additional literature[19] inquiring ATs employed in high school settings emphasized the importance of communication with coaches regarding duties and qualifications. The authors suggested an emphasis in learning communication skills during the didactic portion and implementing the skills in the clinical portion of the ATEP. Based on this research, employers and employees have demonstrated the importance and need for graduates to come into clinical settings with competent communication skills.

The educational preparation of professional practitioners has been explored in other health care disciplines. Entry-level physiotherapists from Australia[20] and Canada[21] have shared their perceptions using questionnaires and interviews as methodology.[22] A study[20] inquiring entry-level Australian physiotherapists identified communication skills, coping in the workplace, and workplace management as areas of educational weakness. Research using entry-level Canadian physiotherapists employed in private practice settings[21] found through telephone interviews that they struggled in communicating with challenging patients and issues related to insurance. Another project[22] investigating entry-level Canadian physiotherapists used a population employed in acute – care hospitals this research concluded educators need to address communication, collaboration, and time management skills. A study[23] conducted in Norwich, England provided qualitative findings from entry-level occupational therapists who expressed feeling inadequately trained in the areas of accessing related services, counseling, and dealing with difficult patients. The participants in this English research felt their education emphasized theory and not practical application. Research[24] providing input from both entry-level physical therapists and occupational therapists in the United States has recommended educators attempt to coalesce theory with practice. A study[25] consisting of entry-level Nurse Practitioners in the United States found that they were least prepared in the areas of injury/illness coding and private insurance billing. Entry-level health care practitioners of disciplines similar to athletic training consistently report areas such as communication skills, consulting skills, and insurance issues as areas of feeling inadequately prepared by their education programs.

The participants of this present study felt least prepared in the areas of insurance and communication when working in the clinical setting. While comments did not go into great detail, the participants suggested feeling unprepared for the technical documentation required for patient evaluation, treatment, and third-party reimbursement. The billing comments may suggest unfamiliarity with injury coding and types or groupings of services that are being billed. Insurance models and guidelines were also mentioned, suggesting the possible need for inclusion examples of proper documentation and coding in ATEP courses. Several examples of feeling unprepared in communication included feeling unsure of how to approach or resolve conflicts involving coaches, athletes, and parents, patient education, and styles with chronic pain patients. Even though professional interpersonal communication skills are included in the 4th edition of the competencies, it seems to be an area of weakness as perceived by entry-level ATs in the clinical setting.

Most Challenging Aspects

The most challenging aspect of working in a clinical setting was found to be insurance restrictions limiting the ATs scope of practice. The participants expressed frustration when limited to an aid's role for physical therapists in the case of non-recognition of ATs as providers by private insurance, and unfortunately, ATs are prohibited from treating Medicare recipients. The future growth, role, and prosperity of the AT in the clinical setting, rides heavily on the balance of the new health care plan introduced by the federal government and the Athletic Trainers' Equal Access to Medicare Act of 2009 which is still in the hands of federal legislators. It would be beneficial for future athletic training students to thoroughly understand the implications surrounding third-party reimbursement and how this could influence their role in the clinical setting. The responses given in the present study are an indication that this information either needs more emphasis in the existing curriculums or requires instruction techniques that result in greater transfer of learning.

Educational Preparation

A majority of the participants of this study stated feeling well prepared in the evaluation and treatment of musculoskeletal injuries due to extensive coursework covering these principles and theory, receiving training in specific skills, and clinical education. The injuries sustained by the physically active patients should be very familiar to the AT, so participants stating this area as one where they were most prepared would be expected.

Demographics

Gender

The results of this study presented some interesting differences in demographic factors. Two gender differences were observed from the participant's responses. One was in response to the question asking them what they felt was the most challenging aspect of their job. A majority of the male participants perceived insurance restrictions to be most challenging. More specifically, the frustration encountered when third-party payers do not recognize ATs and deny reimbursement for their services. With these restrictions, ATs are forced to take on a role as physical therapy aids. The frustration being primarily a male response was simply an observation and cannot be explained. The female participants perceived themselves as well prepared educationally for the clinical setting. Again, why the female population demonstrated greater confidence than males in their competency level for the clinical environment was an observation that cannot be explained.

Highest Degree

All eight of the participants in the bachelor degree group noted being ill-prepared for the level of communications skills needed in the clinical setting. Undergraduate athletic training students may not experience the same opportunities to acquire these skills as graduate students who receive greater exposure to these skills in a number of ways. Graduate students often have more writing assignments and presentations than undergraduates, and

a graduate student's clinical education may demand a higher level of responsibility requiring communication with coaches, physicians, parents, athletes, and other athletic trainers.

Percentage of Working Hours in Clinic

It stands to reason that the participants employed in physician-owned clinics and stating working within the confines of the clinic 76-100% of the time would enter this type of environment, at least in part, because of the limited and stable number of hours in a work week. The schedules within the clinic are very structured, so the greater the percentage of time spent within the clinic, the less likely an AT will be needed beyond the normal 40 hour work week.

The participants spending 0-25% of their working hours within the clinic felt confident in their competency as an entry-level practitioner. The participants in this group most likely have extensive outreach responsibilities with local high schools, colleges, or professional sports which are traditional environments that draw on the knowledge and skills that have been identified and covered extensively in ATEP curriculums. The participants with positions of greater outreach demand would be expected to feel comfortable in those roles.

Clinical Role

There were two participants in this study who identified rehabilitation as their primary role in the clinical setting. They both stated feeling unprepared in the communication skills required in the clinical setting. The patient, colleague, administration, and physician interpersonal communication skill demands along with specific documentation requirements of this environment may need greater attention in current and future ATEPs.

Limitations

This qualitative study explored participant perceptions as they presently exist. Although the questionnaire was pilot tested, misunderstanding of the content could have influenced the responses. Two significant limitations are the small subject pool and the fact that eight of the 15 participants had used the 4th edition Athletic Training Educational Competencies document for one year or less of their athletic training educational experience. This limits the ability to compare the 4th edition of the competencies to the results of this study. The 5th edition of the competencies have been released in 2011, thus the results of this study should be interpreted with caution.

Future Investigation

Further study of athletic training populations at the entry-level ATs in other settings would provide information specific to different practice settings. Investigations using additional stakeholder populations, such as experts and patients associated with each athletic training job setting, to obtain a consensus of perceptions regarding educational preparation would be critical for future curriculum development, continuing education, and post-professional programs.

CONCLUSIONS

ATs can be of tremendous benefit in the clinical setting by providing injury prevention, evaluation, rehabilitation services, and outreach assignments. Demonstrating the ability to service the physically active population with musculoskeletal injuries both efficiently and effectively would encourage present and future clinical stakeholders to acknowledge the athletic training profession with improved status.

Competitive salaries and attractive work schedules drew these subjects to the clinical setting. Once employed, they discovered learning from their colleagues and helping patients were the positive experiences encountered and provided the greatest job satisfaction respectively. The areas mentioned by the participants which they perceived being educationally unprepared were insurance issues and communication skills. When considering demographic factors, the participants who held baccalaureate degrees only and those who worked in the clinic to the greatest extent felt the least prepared in communication skills. Although theses areas of competency are stated in the 4th edition competency document, either specific skills are needed that are not being covered or transfer of learning is not taking place.

The most challenging and frustrating aspect of the entry-level clinical AT job was the lack of insurance reimbursement for athletic training services, which often limited their scope of practice. Third-party reimbursement of athletic training services needs continued emphasis by the NATA to establish a more desirable employment environment, and specific inclusion in ATEPs to prepare graduates for the legal and documentation issues experienced in the clinical setting.

This expansion must include information specific to clinical settings, as these now employ the largest percentage of NATA – member ATs. To this end, either ATEP curriculums need to adjust their subject matter concentration or continuing education, post-graduate fellowships, internships, or residencies need to develop to both meet these needs and allow competent AT practitioners to demonstrate their value and ultimately extend their services, responsibilities, and recognition.

REFERENCES

1. National Athletic Trainers' Association (NATA). Availabe at:http://cf.www.nata.org/members1/documents/membstats/2009 08.htm. Accessed September 10, 2009.
2. Pitney WA. The professional socialization of certified athletic trainers in high school settings: a grounded theory investigation. *J Athl Train*. 2002;37(3):286-292.
3. Gieck J, Lephart S, Saliba E. NATA certification: A 5 & 10 year follow-up. *J Athl Train*. 1986;Summer:120-163.
4. Weidner TG, Vincent WJ. Evaluation of professional preparation in athletic training by employed, entry-level athletic trainers. *J Athl Train*. 1992;27(4):304-310.
5. Weidner TG. Athletic training continuing education needs assessment: pilot study. *J Athl Train*. 1994;29(1):67-69.
6. Duncan KM, Wright KE. A national survey of athletic trainer roles and responsibilities in the allied clinical setting. *J Athl Train.* 1992;27(4):311-316.
7. Massie JB, Strang AJ, Ward RM. Employer perceptions of the academic preparation of entry-level certified athletic trainers. *Athl Train Edu J.* 2009;4(2):70-74.
8. National Athletic Trainers' Association (NATA). *Athletic Training Educational Competencies.* 4th ed. Dallas, TX:NATA; 2006.

9. Schaefer DR, Dillman DA. Development of a standard e-mail methodology. *Public Opin Q*.1998;62(3):378-397.
10. Coderre F, Mathieu A. Comparison of the quality of qualitative data obtained through telephone, postal and email surveys. *Int J Mark Res.* 2004;46(3):347-357.
11. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today.* 2004;24(2):105-112.
12. Hertel J. Keep it simple: study design nomenclature in research article abstracts. *J Athl Train.* 2010;45(3):213-214.
13. Elo S., Kyngas H. The qualitative content analysis process. *J Adv Nurs*. 2007;62(1):107-115.
14. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval.* 2006;27(2):237-246.
15. Moss CL. 1994 entry-level athletic training salaries. *J Athl Train.* 1996;31(1):25-28
16. National Athletic Trainers' Association. Available at: http://nata.org/sites/default/files/salary-survey-career.pdf.
17. Gardiner-Shires A, Mensch J. Attractors to an athletic training career in the high school setting. *J Athl Train*. 2009;44(3):286-293.
18. Kahanov L, Andrews L. A survey of athletic training employers' hiring criteria. *J Athl Train*. 2001;36(4):408-412.
19. Mensch J, Crews C, Mitchell M. Competing perspectives during organizational socialization on the role of certified athletic trainers in high school settings. *J Athl Train*. 2005;40(4):333-340.
20. Hunt A, Adamson B, Harris L. Physiotherapists' perceptions of the gap between education and practice. 1998;14(3):125-138.
21. Solomon P, Miller PA. Qualitative study of novice physical therapists' experiences in private practice. *Physiother Can.* 2005;57(3):190-198.
22. Miller PA, Solomon P, Giacomini M, Abelson J. Experiences of novice physiotherapists adapting to their role in acute care hospitals. *Physiother Can*. 2005;57(2):145-153.
23. Atkinson K, Steward B. A longitudinal study of occupational therapy new practitioners in their first years of professional practice: preliminary findings. *Br J Occup Ther.* 1997;60(8):338-342.
24. Tryssenaar J, Perkins J. From student to therapist: exploring the first year of practice. *Am J Occup Ther.* 1999;55(1):19-27.
25. Hart AM, Macnee CL. How well are nurse practitioners prepared for practice: results of a 2004 questionnaire study. *J Am Acad Nurse Pract*. 2007;19(1):35-42.

Table 1. Demographic Information (n=15)

	n	%
Gender		
Male	7	46.7
Female	8	53.3
Age		
21-25	11	73.3
26-30	4	26.7
31-35	0	0
36+	0	0
Highest Degree		
Bachelors	8	53.3
Masters	7	46.7
Doctorate	0	0
Years as a Certified Athletic Trainer		
0-1	3	20.0
2-3	10	66.7
4-5	2	13.3
6+	0	0
Months employed in a clinical setting		
0-6	11	73.4
7-12	0	0
13-18	2	13.3
19-24	2	13.3
25-30	0	0
31-36	0	0
37+	0	0
Current Clinical Setting		
Hospital-based clinic	0	0
Outpatient/ambulatory/rehabilitation clinic	1	6.7
Physician owned	5	33.3
Secondary school clinic	8	53.3
Other clinic	1	6.7
Percentage of total hours spent within clinic (excluding outreach)		
0-25	6	40.0
26-50	1	6.7
51-75	2	13.3
76-100	6	40.0
Roles in the clinic		
Physician extender	4	26.7
Rehabilitation - Own patients	2	13.3
Rehabilitation - Physical Therapist aid	4	26.7
Other:	5	33.3
Orthotic fitter	1	
Outreach only (High School)	3	
Splitting, casting	1	